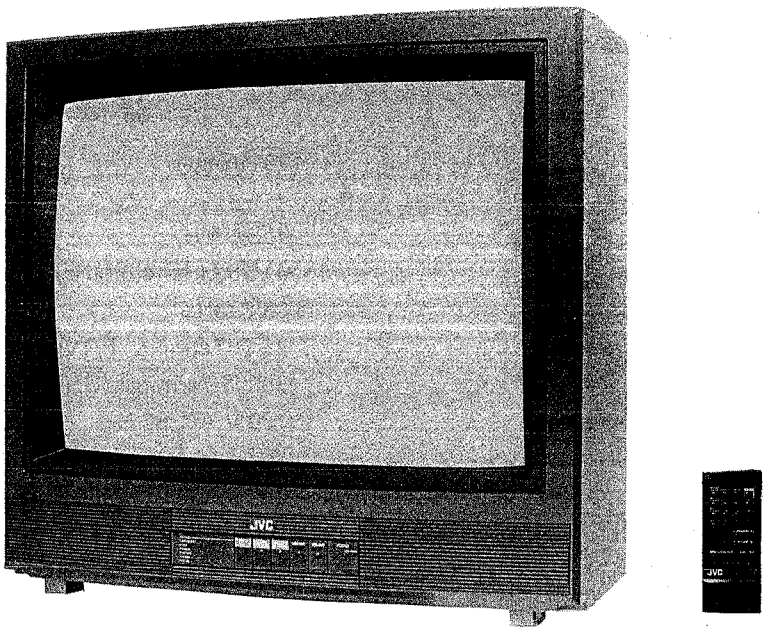
C-2627

JVC

SERVICE MANUAL

28" COLOR TV

MODEL C-2627 (CA)



■ SAFETY PRECAUTION

As for safety precautions including electric shock prevention, use of designated components, or safety inspection after servicing, refer to the appended NTSC.

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* With SHCEMATIC DIAGRAM and SERVICE ADJUSTMENT (NTSC)

No. 50002
Jul. 1987

I. SPECIFICATIONS

Dimensions	67.0 cm(W) x 54.5 cm(D) x 63.4 cm(H)
Weight	37 kg
GND	Only LIVE GND
TV System and Color System	
TV RF System	CCIR(M)
Color System	NTSC
TV Receiving Channels and Frequency	
VL Band (02 ~ 06)	54 MHz ~ 88 MHz
VH Band (07 ~ 13)	174 MHz ~ 216 MHz
UHF Band (14 ~ 69)	470 MHz ~ 806 MHz
CATV Receiving Channels and Frequency	
Low Band (02 ~ 06, A-8 ~ A-6) by (02 ~ 06 & 01, 93, 94)	54 MHz ~ 474 MHz
High Band (07 ~ 13) by (07 ~ 13)	
Mid Band (A ~ I) by (14 ~ 22)	
Super Band (J ~ W) by (23 ~ 36)	
Hyper Band (W+1 ~ W+29) by (37 ~ 65)	
Sub Mid Band (A-5 ~ A-1) by (95 ~ 99)	
On screen channel indication	02 ~ 13, 14 ~ 69 channels (TV)
	01 ~ 65, 93 ~ 99 channels (CATV)
TV/CATV Total Channel	128 channels
Intermediate Frequency	
Video IF Carrier	45.75 MHz
Sound IF Carrier	41.25 MHz (4.5 MHz)
Color Sub Carrier	3.58 MHz
Antenna Input Impedance	75 Ω Terminal, F-Type Connector (VHF)
	300 Ω Terminal (UHF)
Power Input	120 V AC, 60 Hz
Input Current	1.7 A
Picture Tube	28" In-Line Type, Full-Square Tint Tube
Viewable Picture Size	52.8 cm(W) x 39.6 cm(H)
High Voltage	28.0 kV ±1 kV (at zero beam current)
Speaker	8 x 12 cm Oval Type, 8 Ω
Audio Power Output	2.5 W
Tube	1
IC	11 (In TV), 1 (In Remocon)
Transistor	19 (In TV), 3 (In Remocon)

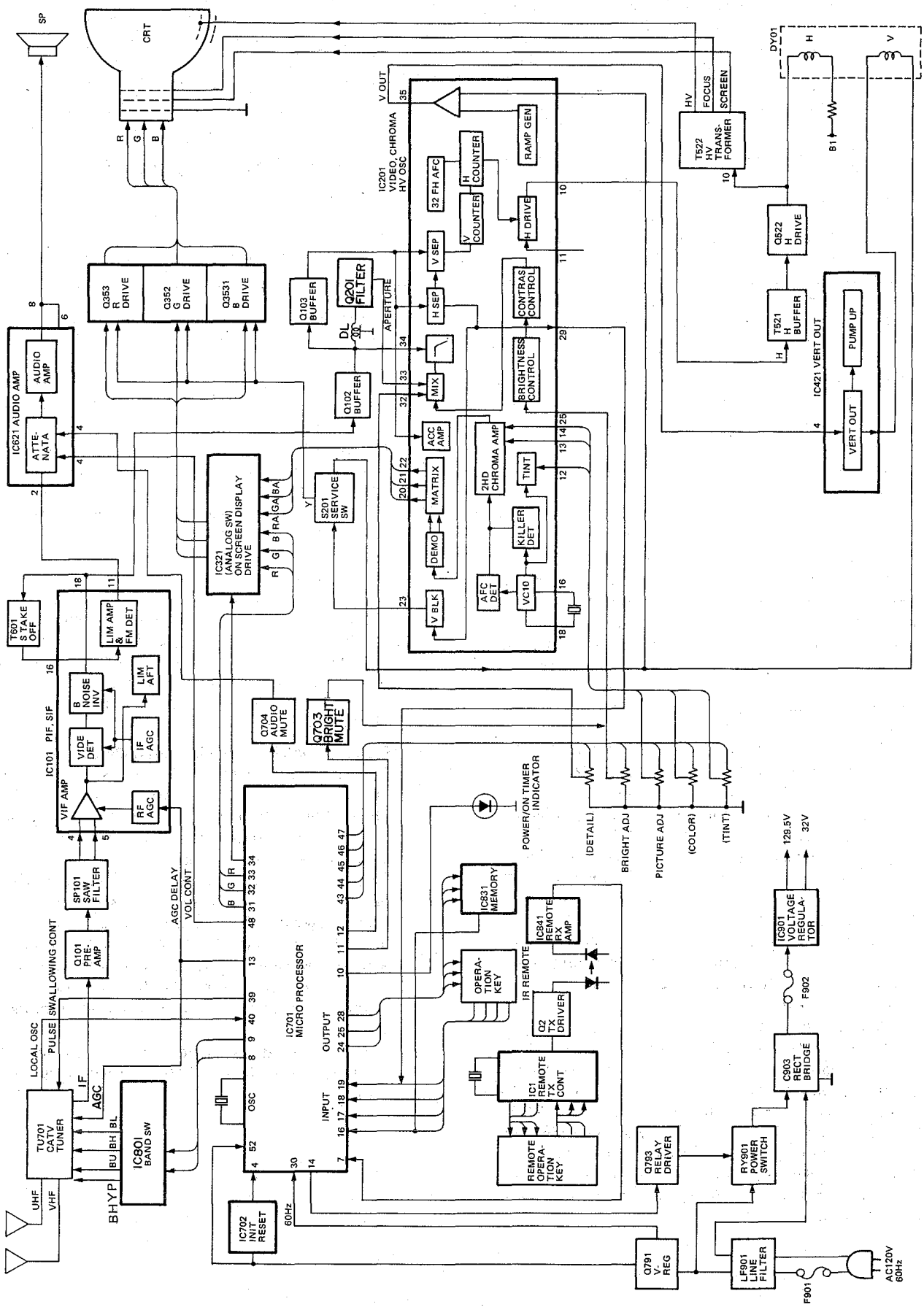
(Design and specifications subject to change without notice)

II. FEATURES

1. New chassis design enables use of a single board with simplified circuitry
2. Provided with miniature tuner (TV/CATV)
3. PLL synthesizer system TV/CATV totaling 128 channels
4. Deletion of user VR by master command and increased features possible simultaneously
5. Multifunctional remote control permits picture adjustment
6. Off-timer for setting time up to 9 hrs., 59 min. (with display of remaining time)
7. On-timer for setting time up to 9 hrs., 59 min. (with display of remaining time)
8. With Clock Display On Screen

III. OUTLINE

■ BLOCK DIAGRAM



■ Circuit Analysis

★ This color television set, using a frequency synthesizer system, is provided with a 1-chip microcomputer having channel display (on the screen), remote control and On/Off-timer functions (JVC custom high-integration PLL incorporated). Interior construction in includes the following blocks: (1) remote control, (2) control, (3) reception, (4) picture amplification/sound detection, (5) picture/chroma, (6) sound, (7) deflection, (8) high voltage, and (9) power supply. These nine blocks are described as follows.

1 Remote Control

Remote control function includes power supply switching, volume adjustment, and channel selection conducted by utilizing near-infrared rays, and thus eliminating wiring. The transmitter, using an IC1 (M50463P), offers 26 functions that include power supply switching by digital code, outputs from pin (23), and drives Q1 and Q2. Data is transmitted from the near-infrared-ray, light-emitting diode D1 (LN66-S).

Transmitted signals are received by the photo diode D841 (PD49PI) on the TV set and input in pin (8) of the remote control amplifier IC841 (μPC 1490HA).

Input signals are amplified, and after waveform shaping, are output from pin (2).

2 Control

To perform overall control of this Model the control unit is composed of a 4-bit 1-chip microcomputer, IC701 (MN15266JMC-1), memory, IC831 (MN12C 25), reset pulse generator, and IC702 (MN1280-K). When the set is turned on, initial conditions of the microcomputer are determined by the output pulse of IC702 pin (3), and the program incorporated in the microcomputer is started. This microcomputer has the following functions:

a) Control key input
Key scanning is performed in the matrix of the output signals of IC701 pins (24), (25), (26), (27), and (28) and the input terminals of pins (16), (17), (18), and (19). Data for selection is memorized in IC831 (MN12C25). Selection is performed by a key scan signal; selected data is output from pin (9) and input into the microcomputer.

b) Real time
The microcomputer has a clock function using a frequency of the commercial power supply. Input taken in from IC701 pin (30) is processed in the microcomputer.

c) Character output
The character output function is designed to display characters such as channel Nos. Characters and display locations are controlled and memorized by the microcomputer. Signals are output from IC701 pin (31), (32), (33), and (34), and input in the on screen display drive circuit. Horizontal and vertical signals, input from pins (49) and (50), are synchronously processed in the microcomputer.

d) Receiving circuit control
Reception and selection are performed by the microcomputer controlling tuner TU701 and VCO/band selector switch IC801. In control, a receiving frequency is determined by the active filter of IC801 (μPC1486C) integrating the charge pump output of IC701 pin (38) and adding the result to the tuner. Further, IC701 pin (40) receives prescaler output from the tuner, and pin (39) outputs a prescaler control signal. Stations are selected by inputting from IC801 (1) and (2) data that is output from IC701 (8) and (9), and outputting it to the tuner via the decoder circuit.

e) Analog signal control
IC701 has eight 6-bit A/D converters used to control volume, color, brightness, etc. Control signals are output from detail – pin (43); brightness – pin (44); picture – pin (45), color – pin (46); and tint – pin (47).

f) Others
Power supply switching is controlled by signals output from IC701 pin (14) of the microcomputer. Also, as to functions, control signals are output from audio mute pin (12) and picture mute pin (11).

3 Reception

The receiver is composed of CATV tuner TU701 (AN7042EP) and IC801 (μPC1486C). From the tuner, a prescaler dividing signal is input into IC701 pin (40) for PLL control. From IC701 pin (39), a prescaler control signal is output and applied to the tuner. For band switching, a band signal for the channel chosen is output from IC701 pins (8) and (9), input for decoding in IC801 pins (1) and (2). Then, it is output from pins (13) and (15) and (14), (16), and input into the control input terminals of the tuner. The received signal is output from the tuner IF output terminal and delivered to the succeeding IF amplifier.

4 Picture Amplification and Sound Detection

The IF signal, via the SAW filter SF101 (CE40953-201), is input into IC101 (M51346AP) pins (4) and (5) of the VIF amplifier. Via the VIF amplifier, limiter, and video detector circuit in the IC, the signal is output as a video signal from pin (18). This output, representing the level of the received signal, is fed back as data to IC701 and used as a reception control signal. This signal is also input in pin (16) via the filter of CF601 (A74603-C). IC101 is provided with an FM detector circuit and an attenuator to provide sound output from pin (9). This sound output is forwarded to the succeeding sound amplifier circuit.

* On this Model a sound output is obtained from pin (11) and delivered to the succeeding attenuator.

5 Picture/Chroma

The picture/chroma block composed of IC201 (TA 8601AN) and peripheral circuits, receives control signals from the microcomputer of IC701. IC201 comprises video, chroma, and deflector circuits. The video circuit, with a differential picture sharpness circuit, also comprises picture control, pedestal-clamp-fitted brightness control, and internal vertical blanking functions. Through detail signal input in the filter and IC201 pin (32), the video signal is input into IC201 pin (34) and delivered to the mixer circuit with its picture sharpness function. Output of the mixer circuit is emitted as brightness signal -Y from pin (23) via contrast control and brightness control circuits. The contrast control circuit is controlled by the brightness signal from pin (25). The chroma signal is input into pin (31) via Q103. Via the ACC amplifier, the chroma amplifier, the demodulation circuit, and the matrix circuit, pin (20) R-Y, pin (21) G-Y, and pin (22) B-Y signals are output. Pin (14) picture and pin (13) color control signals are input into the chroma amplifier.

6 Sound

The sound amplifier consists of IC621 (AN5265), comprising an attenuator and an audio amplifier circuit, and receives the sound signal from IC101 via pin (2).

For attenuator control, used is an electronic volume designed to be adjusted by the analog voltage output if IC701 pin (48). Sound output amplified and driving the speaker is supplied from pin (8).

7 Deflection

Deflection is performed by the circuit incorporated in IC201 (TA8601AN). This IC comprises a synchronous separator, vertical synchronous, horizontal drive output, X-ray protector, and vertical NFB amplifier circuits.

The vertical synchronous signal is input in pin (5) via the separator circuit, controlling the vertical signal generating counter, output from pin (35), and input into pin (4) of the IC421 (AN5521) vertical output IC, while a pulse to drive yoke coil DY01 is output from pin (2). For the horizontal signal, the oscillating clock signal of IC201 pin (8) is output from pin (10) via the interior horizontal counter and the horizontal driver.

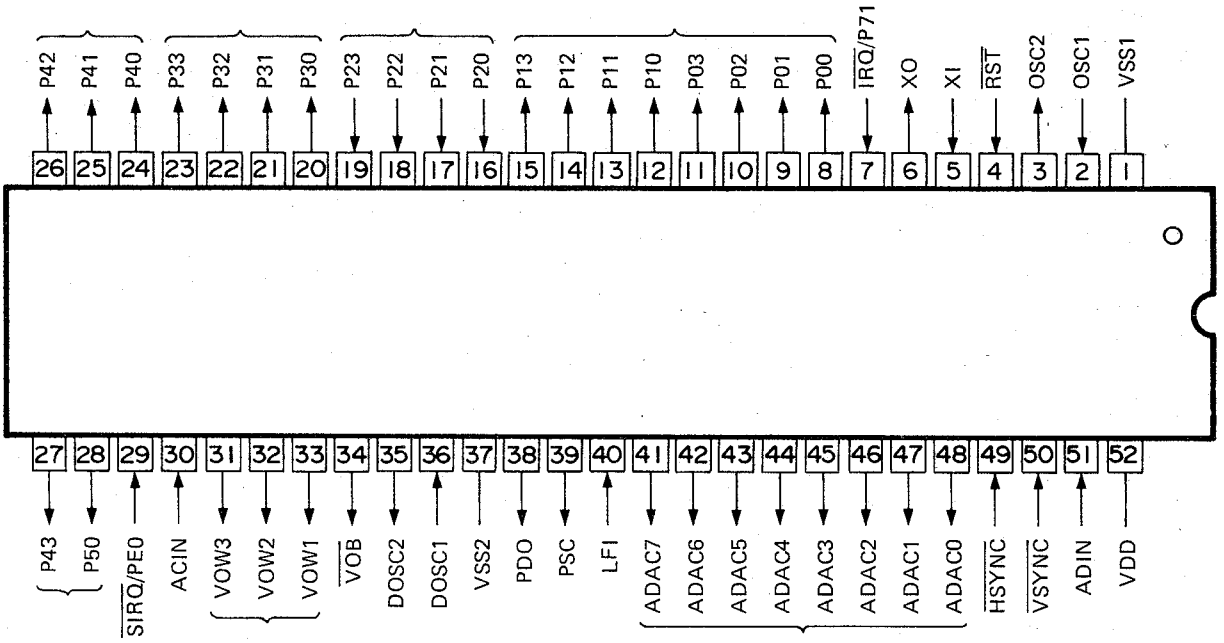
8 High Voltage

A high voltage of about 28 kV must be applied to the anode of the picture tube. To obtain this high voltage, a high-voltage transformer is installed in parallel with the horizontal deflection yoke. Also, high-voltage transformer T522 is used to provide a low +B, CRT heater and vertical output circuit-applied voltages, and to pick out horizontal pulses. If voltage higher than the setting is caused by a fault in the high-voltage circuit, resistor RB507 and zener diode D503 detect such trouble. A trouble signal is input in IC201 pin (11), causing the X-ray protector circuit to interrupt the horizontal deflector circuit.

9 Power Supply

The power supply circuit constantly feeds about 5 V to IC841 and IC701 from Q791. From IC701 pin (14) output of the microcomputer, relay RY901 is controlled to enable power to be supplied to the HVT and other circuits. The power supply circuit feeds 129.5 V regulated in IC901 to those parts concerned from pin (4).

• IC701 SENSOR CONTROL/MICRO PROCESSOR IC

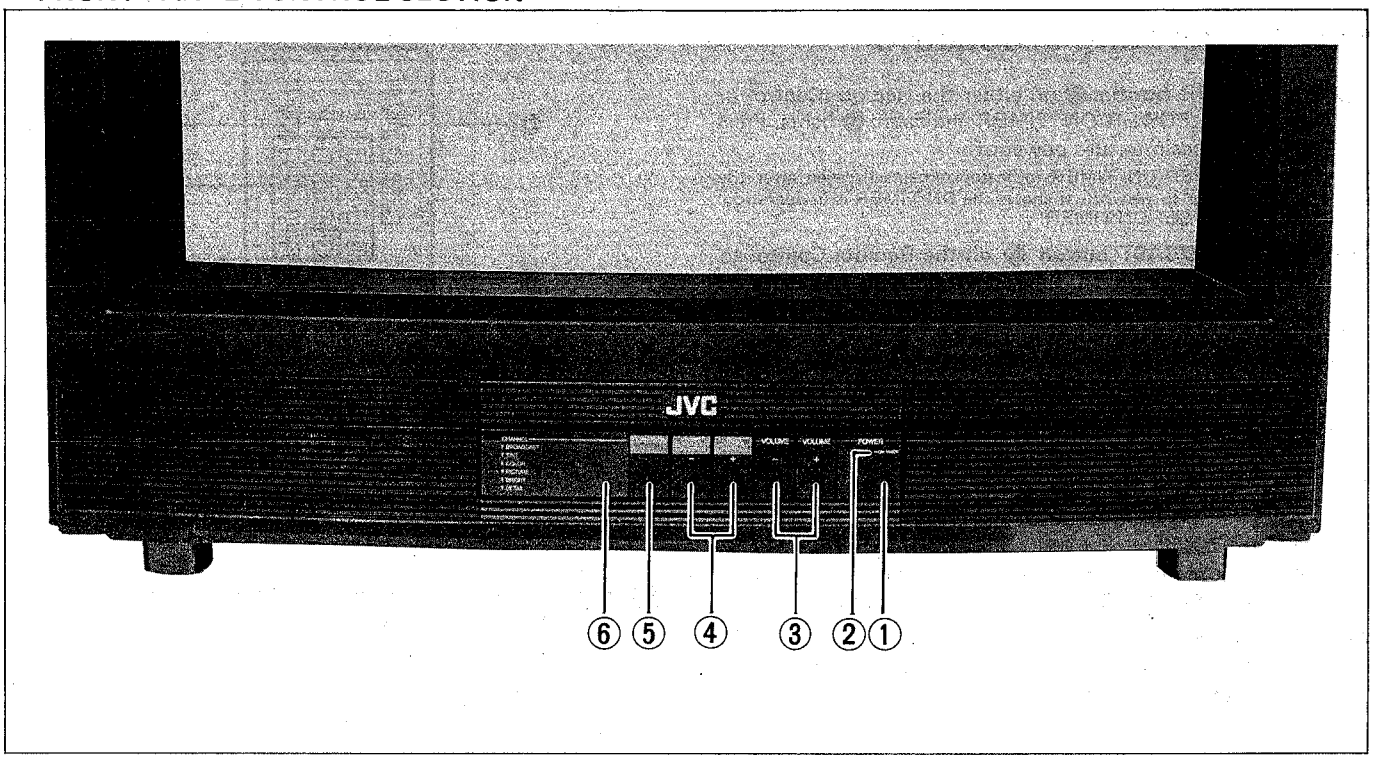


PIN FUNCTIONS

Pin No.	Code	Name	Function
1	VSS1	GND terminal	To connect the ground (0 V).
2 3	OSC1 OSC2	Oscillating terminal	To oscillate the system clock by connecting the oscillating element to the capacitor. Feedback resistor installed between OSC1 and OSC2.
4	$\overline{RST}$	Reset signal input terminal	Resetting is effected by inputting the "L" level for more than 1 machine cycle. Pull-up resistor optional.
5 6	XI XO	Oscillating terminal	To oscillate the time clock by connecting the oscillating element to the capacitor. Feedback resistor installed between XI and XO.
7	$\overline{IRQ}$/P71	Interruption signal input terminal	By inputting a negative edge signal, interruption of program control is accepted. The input terminal level can be monitored by the interior port. Pull-up resistor optional.
8 ~ 15	P00 ~ P13	Parallel data output terminal	Output port for 4-bit parallel data 12 V-level, high-voltage-proof N-channel open drain output. Optional push/pull available
16 ~ 19	P20 ~ P23	Parallel data input terminal	Input port for 4-bit parallel data. Pull-up resistor optional.
20 ~ 23	P30 ~ P33	Parallel data input/output terminal	Input/output port for 4-bit parallel data. Serves as a push/pull output port in the output mode.
24 ~ 28	P40 ~ P50	Parallel data output terminal	Push/pull output port for 4-bit parallel data.
29	$\overline{SIRQ}$/PE0	Interruption signal input terminal	When a negative edge signal is input, interruption of program control is accepted. The input terminal level can be monitored by the interior port. Pull-up resistor optional.
30	ACIN	Input terminal	Real-time counter reading AC input terminal.
31 ~ 33	VOW3 ~ VOW1	Display signal output terminal	Character-generator character signal output terminal. VOB is background output.
34	VOB		
35 36	DOSC2 DOSC1	Oscillator terminal	Clock oscillator terminal for character generator. (LC oscillation)
37	VSS2	GND terminal	To connect the ground (0 V). (for CRT)
38	PDO	PD output terminal	Output terminal for VCO control. Used by converting to DC with exterior LPF.
39	PSC	Control output terminal	Prescaler control output terminal.
40	LFI	LF input terminal	Input terminal from prescaler.
41 ~ 48	ADAC7 ~ ADAC0	DAC output terminal	Output terminal for volume DAC. Coupled to low-pass filter. 12 V-level, high-voltage-proof N-channel open drain output.
49 50	$\overline{HSYNC}$ $\overline{VSYNC}$	Synchronous input terminal	Horizontal/vertical synchronous signal input terminal for character generator.
51	ADIN	Input terminal	AD-converted voltage input terminal.
52	VDD	Power supply terminal	To connect +4.5 ~ 5.5 V.

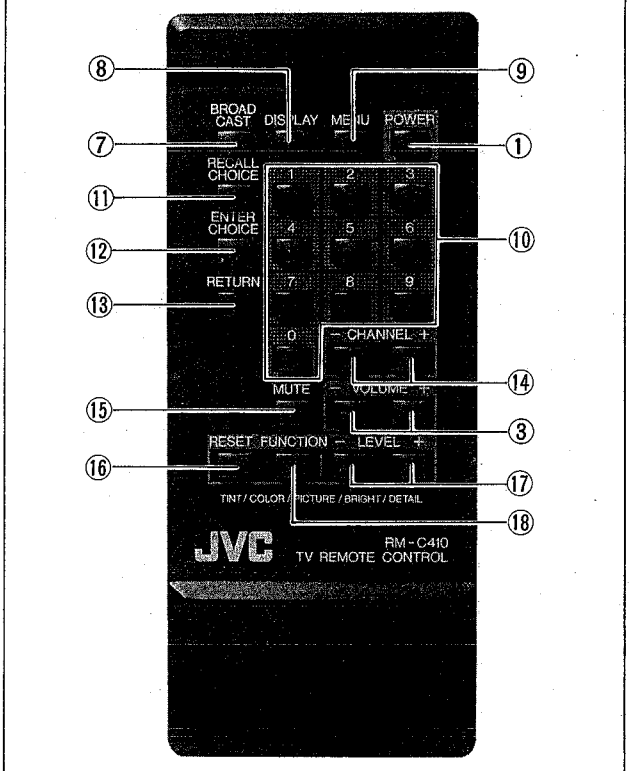
Ⅳ. FUNCTIONS

■ FRONT PANEL CONTROL SECTION

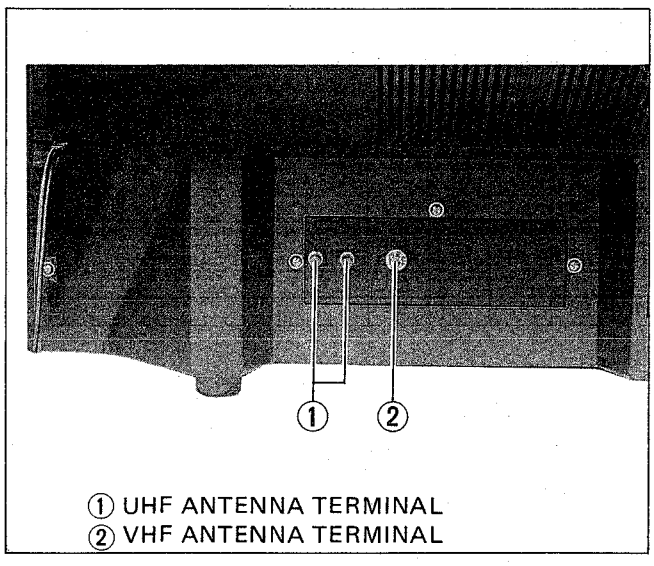


① POWER button
② POWER/ON TIMER indicator
③ VOLUME (-/+) buttons
④ LEVEL/CHANNEL(-/+) buttons
⑤ FUNCTION button
⑥ Remote Control Sensor
⑦ BROADCAST button
⑧ DISPLAY button
⑨ MENU button
⑩ 10-Digit Keypad
⑪ RECALL CHOICE button
⑫ ENTER CHOICE button
⑬ RETURN button
⑭ CHANNEL (-/+) buttons
⑮ MUTE button
⑯ RESET button
⑰ LEVEL(-/+) buttons
⑱ FUNCTION button (Remote Control)

■ REMOTE CONTROL SECTION



■ REAR TERMINAL



① UHF ANTENNA TERMINAL
② VHF ANTENNA TERMINAL

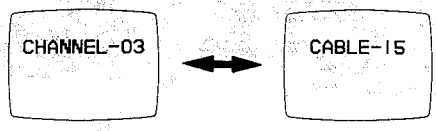
TV OPERATION

Basic Operating Procedure

1 **Press POWER button ❶** on either the Remote Control or front panel. POWER/ON TIMER indicator ❷ lights. Press this button again to turn power off.

Note: If POWER/ON TIMER indicator remains lit even after the power is turned off, it shows the ON TIMER is in operation. See "5. SET ON TIMER".

2 **Press BROADCAST button ❼** on the Remote Control to select the mode. Each time it is pressed, the mode is switched between "CHANNEL" and "CABLE".
When connected to an antenna, select "CHANNEL" mode for normal VHF/UHF reception. When connected to cable TV, select "CABLE" mode. The on-screen display will show the following:



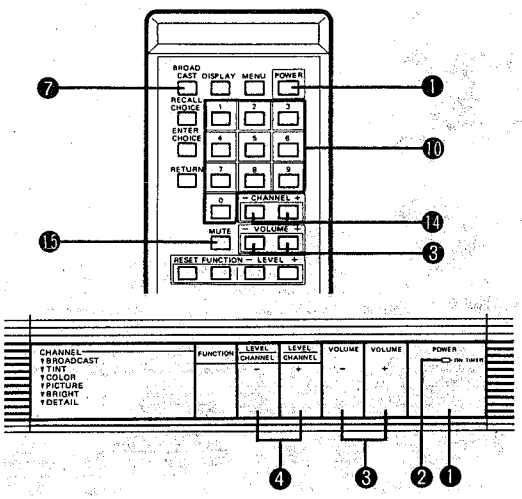
Note: For mode selection using the front panel controls, see "FUNCTION BUTTON" on next page.

3 **Select desired channel** using CHANNEL (-/+) buttons ⓮ on the Remote Control (or LEVEL/CHANNEL (-/+) buttons ❹ on the front panel). Pressing the (+) button advances to higher channels, (-) button to lower channels.

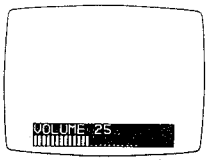
Note: Certain channels have been preset at the factory. It may be necessary to add or erase some channels in your area. See "3. CHANNEL MEMORY" on page 11 for presetting channels.

- Channels can be selected directly by using 10-Digit Keypad ⓾ on the Remote Control.
  Remember to press 2 numbers when selecting.
  For example: if you select channel 5, press "0" first, then press "5". When selecting cable channels, refer to the CABLE TV CHANNEL CONVERSION CHART below.

Note: When a video source such as a VCR is connected to the antenna terminal to be viewed on Channel 3 (or Channel 4), sometimes channel selection may result in an unclear or distorted picture. In this case, re-select Channel 3 (or 4) by pressing "03" (or "04") of 10-Digit Keypad and the picture will become clear.



4 **Press VOLUME (-/+) buttons ❸** on either the Remote Control or front panel to adjust volume to your desired listening level. Pressing the (+) button will make the sound louder, the (-) button will make it softer. The volume level is indicated on the screen by reference number (00 – 50) and by bar scale as shown.



Note: The volume level can be made minimum instantly by pressing the MUTE button ⓯ on the Remote Control. See "MUTE Button".

On-screen Display

- Once the on-screen display appears on the screen, it disappears in few seconds. (Only the clock time can be kept displayed on the screen. See "DISPLAY Button".)
- When tuned to a channel where no program is being broadcast, the on-screen display may be unclear or blurred.

CABLE TV CHANNEL CONVERSION CHART

In addition to normal TV reception from an antenna for VHF (Channels 2 – 13) and UHF (Channels 14 – 69), your TV set is equipped to receive non-scrambled cable TV channels. Sub-Mid band (A-8 – A-1), Mid band (A – I), Super band (J – W) and Hyper band (W+1 ~ W+29) can be received by using the channel selections as shown in the following chart.

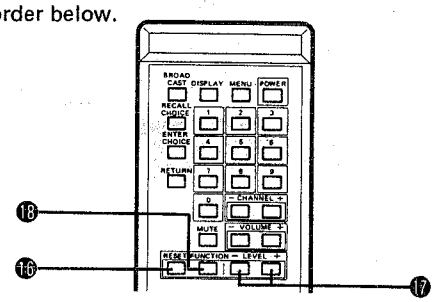
*	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
**	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
*	W	W+1	W+2	W+3	W+4	W+5	W+6	W+7	W+8	W+9	W+10	W+11	W+12	W+13	W+14	W+15	W+16	W+17	W+18	W+19	W+20	W+21
**	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57
*	W+22	W+23	W+24	W+25	W+26	W+27	W+28	W+29	A-8	A-7	A-6	A-5	A-4	A-3	A-2	A-1						
**	58	59	60	61	62	63	64	65	01	05	06	95	96	97	98	99						

* : Regular cable channel designations
**: Your TV set's corresponding on-screen CABLE channel numbers

FUNCTION BUTTON

The FUNCTION button on the front panel selects the control modes for TV operation and picture adjustment.

- Press FUNCTION button ❺ on the front panel to select the desired control mode. Each time the FUNCTION button is pressed, the on-screen display shows the selected control mode in the order below.

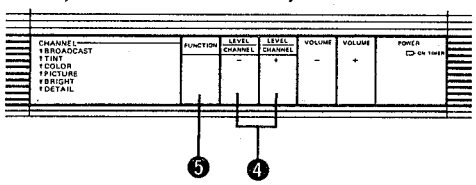


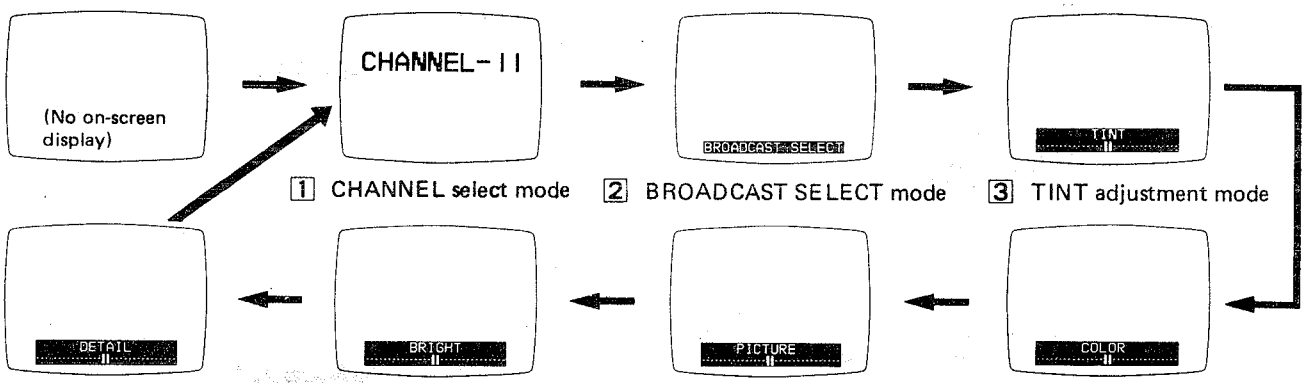
Note: The Remote Control's FUNCTION button ⓲ selects **only picture adjustment modes: TINT, COLOR, PICTURE, BRIGHT and DETAIL.** The other control modes can be selected directly with the Remote Control's respective buttons.

- After selecting the desired mode, press LEVEL/CHANNEL (-/+) buttons ❹ on the front panel or LEVEL (-/+) buttons ⓱ on the Remote Control while the selected mode indication is being displayed to make your preferred adjustment. Remote Control LEVEL buttons control **only picture adjustments.**

Notes: ●When using the front panel buttons, before the FUNCTION button is pressed the first time with nothing displayed on the screen, the TV is in the "CHANNEL" mode. Therefore, in this mode, channel selection is possible by pressing LEVEL/CHANNEL buttons ❹ on the front panel.

●After completing picture adjustments from the Remote Control selecting either LEVEL button ⓱ will return directly to the last chosen adjustment mode.





1 CHANNEL select mode 2 BROADCAST SELECT mode 3 TINT adjustment mode

7 DETAIL adjustment mode 6 BRIGHT adjustment mode 5 PICTURE adjustment mode 4 COLOR adjustment mode

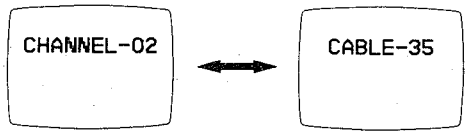
1 CHANNEL select mode

In this mode, press LEVEL/CHANNEL (+) button ❹ on the front panel to advance to higher channels, and (-) button for lower channels.

(The screen illustrations on the right show the case when the TV is in the "CHANNEL" mode. When in the "CABLE" mode, the "CABLE" indication appears instead of "CHANNEL".)

2 BROADCAST SELECT mode

In this mode, press LEVEL/CHANNEL (-/+) buttons ❹ on the front panel to change the BROADCAST mode between "CHANNEL" (for regular UHF/VHF channels) and "CABLE" (for cable channels).

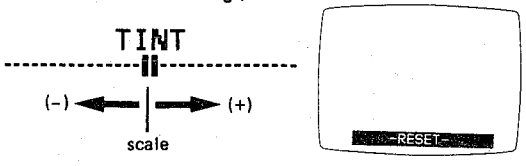


3 – 7 Picture adjustment modes

In these modes, an adjustment scale with a marker appears on the screen. Press LEVEL/CHANNEL (-/+) buttons ❹ on the front panel or LEVEL buttons ⓱ on the Remote Control to fine adjust each item to your preference according to the chart below.

(-)	LEVEL	(+)
Reddish	TINT	Greenish
Subdued	COLOR	Vivid
Light	PICTURE	Strong
Dark	BRIGHT	Bright
Soft	DETAIL	Sharp

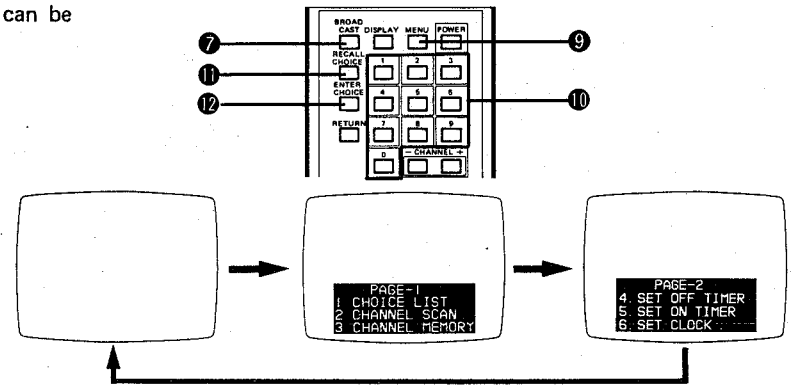
Note: Pressing the RESET button ⓰ on the Remote Control restores all adjustment modes to their scale's center position. (The center position is only a reference level, rather than a standard setting.)



MENU BUTTON

The "MENU" button selects a list of functions that can be programmed for operating the TV more conveniently.
This function is possible only on the Remote Control.

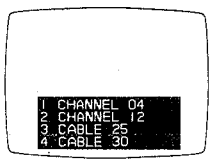
- Press MENU button ❾ on the Remote Control to display the list of programmable convenience functions on the screen.
  The "MENU" consists of 2 pages. Press the MENU button repeatedly to display the pages in the sequence on the right.
- Press numbers "1" through "6" on 10-Digit Keypad ❿ to select the corresponding function in the numbered "MENU".



PAGE-1

1. CHOICE LIST

With "PAGE-1" MENU displayed on the screen, press "1" of 10-Digit Keypad ❿ to display four CHOICE channels on the screen.
Four numbers for presetting CHOICE channels will appear on the screen as shown. Follow "Presetting CHOICE Channels" instructions below to preset the 4 CHOICE channels.

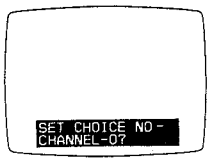


Note: Some CHOICE channels may already be preset at the factory.
If you have previously preset the CHOICE channels, the 4 preset CHOICE channels will appear on the screen and you can select your CHOICE channel for immediate viewing by pressing the corresponding number, "1" through "4", on the 10-Digit Keypad.
If you wish to reset any of the 4 CHOICE channels, follow the instructions below.

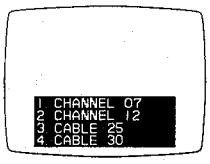
Presetting CHOICE Channels

1) While in the channel select mode (either "CHANNEL" or "CABLE" mode), determine the channel you wish to preset as a CHOICE channel and display it on the screen.
(For example: press "0" and "7" to display "CHANNEL 07".)

2) Press ENTER CHOICE button ⓬.
"SET CHOICE NO. -" and "CHANNEL-07" (channel number you have just selected) will appear on the screen.



3) Press a number (1 — 4) on 10-Digit Keypad ❿ for the CHOICE channel number you wish to preset.
   - For example:
     If you select No. "1" CHOICE channel, "1. CHANNEL 07" appears on the screen when you check the CHOICE LIST to confirm your "CHOICE 1".



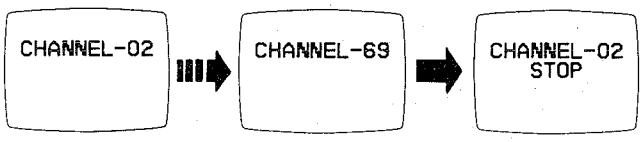
4) Repeat steps 1) through 3) to preset up to 4 CHOICE channels.

RECALL CHOICE Button

- Simply press RECALL CHOICE button ⓫ anytime you want to call up the CHOICE LIST of preset CHOICE channels for convenient direct CHOICE channel selection.
- While the CHOICE LIST is on the screen, press the corresponding number of 10-Digit Keypad ❿ to select the preferred channel.

2. CHANNEL SCAN

1) With "PAGE-1" MENU displayed on the screen, press "2" of 10-Digit Keypad ❿.
   - All memorized channels (either "CHANNEL" or "CABLE" mode) will now scan sequentially in ascending order beginning with the channel that the TV is tuned to. Scanning will stop automatically when the original channel is reached. "STOP" appears beneath the channel number to show the CHANNEL SCAN mode has finished.



2) Press any button on the Remote Control, if you wish to stop scanning at a certain channel before the original channel is reached.
To resume scanning, press MENU button ❾ and then "2" on 10-Digit Keypad ❿.

Notes:

- When the TV is in the "CABLE" mode, the "CABLE" indication appears on the screen instead of "CHANNEL".
- For changing memorized channels, see next section "3. CHANNEL MEMORY".
- If you wish to start CHANNEL SCAN at a specific channel, first select the BROADCAST mode then that channel number, and then follow instructions above.
- While actual CHANNEL SCAN is being performed, all front panel buttons become inoperable.

3. CHANNEL MEMORY

Some channels have been preset at the factory. To change the memorized (preset) channels to match the TV broadcasts (or cable channels) of your area, perform the following:

1) First press BROADCAST button ❼ to select either "CHANNEL" or "CABLE" mode.
2) With "PAGE-1" MENU displayed on the screen, press "3" of 10-Digit Keypad ⓾.
   The following message will appear on the screen. The bottom line shows the channel to which the TV is tuned.

3) Press "1" (ADD) to add this channel in memory.
   A bar "–" will momentarily appear between the broadcast mode (CHANNEL or CABLE) and the channel number and the displayed channel number advances automatically to show the channel is memorized.
4) Press "2" (ERASE) to erase this channel from memory, if you do not wish to preset it in memory or if no TV station is broadcasting on it.
   The bar between the broadcast mode and channel number will disappear and the displayed channel number automatically advances immediately to show the channel is no longer in memory.
5) Press "3" (KEEP) to maintain the channel's present status (either memorized or not) then, the displayed channel number also advances automatically.
6) Repeat steps 3) through 5) for all the channels.
7) Press "4" (END) when you have stored all required channels in memory.
8) When you wish to preset channels of the other BROADCAST mode, select the mode first, then repeat steps 2) through 7).

Notes:

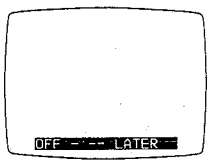
- Perform each necessary operation above while the message is displayed on the screen.
- When you wish to "ADD" or "ERASE" a specific channel, first select the BROADCAST mode and that channel number, then follow steps 2) through 7).
- After presetting all the channels you need, when you perform CHANNEL SCAN, the TV sweeps only the channels you have stored in memory.

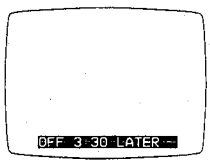
PAGE-2

4. SET OFF TIMER

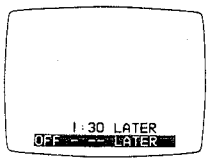
The "OFF TIMER" feature allows you to turn off your TV automatically after a preset time of up to 9 hours 59 minutes.

1) With "PAGE-2" (or "PAGE-1") MENU displayed on the screen, press "4" of 10-Digit Keypad ⓾.





2) Press the numbers on the Keypad to set the desired period of time before switch-off. For example, if you want the TV to switch-off automatically after 3-1/2 hours have passed, press "3", "3", and "0". The selected period of "3:30" will appear on the screen to indicate your OFF TIMER setting. The OFF TIMER can be set for up to 9 hours 59 minutes.
3) To reset the OFF TIMER or to check the remaining time, press MENU button ❾ and select "4. SET OFF TIMER" on PAGE-2. The on-screen display will show:



Then, press the appropriate numbers as in step 2) above to reset the OFF TIMER.

4) To cancel the OFF TIMER setting, simply press "0" repeatedly, with the above display on the screen. The display will read: "OFF 0:00 LATER", to show the OFF TIMER is cancelled.

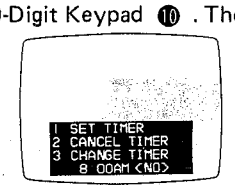
Notes:

- If an invalid time is selected (for example: "5:87"), it will be rejected and the OFF TIMER must be reset properly.
- While the OFF TIMER is activated, if the power is disconnected (such as in the case of power failure, etc.) and reapplied later, the OFF TIMER is automatically set between 2 and 3 hours.
- The OFF TIMER may turn the TV a little earlier than the preset time. (The accuracy of the OFF TIMER is ± 1 minute.)

5. SET ON TIMER

The "ON TIMER" feature allows you to turn on your TV automatically at a preset time.

With "PAGE-2" (or "PAGE-1") MENU displayed on the screen, press "5" of 10-Digit Keypad ⓾. The display will show:



- The bottom line shows the preset time if already previously set.

1) SET TIMER

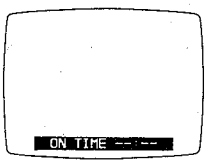
Press "1" to start the ON TIMER for turning the TV on automatically at the preset time shown. A "<YES>" appears to show that the ON TIMER has started.

2) CANCEL TIMER

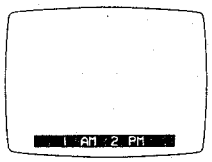
Press "2" to cancel the setting. A "<NO>" appears to show that the ON TIMER has been cancelled.

3) CHANGE TIMER

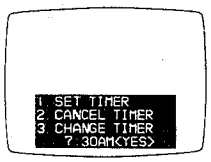
Press "3" to re-adjust the setting. Then, the following display appears.



Press the numbers on the Keypad to set the desired switch-on time. For example, if you want the TV to switch on automatically at 7:30 AM, press "0", "7", "3" and "0". The selected time of "7:30" appears and immediately the display changes to:



Then, press "1" to select the "AM" setting. (Press "2" to select the "PM" setting.) Now the following display appears on the screen to show the ON TIMER is set to "7:30 AM" with the <YES> indicating the ON TIMER has started. Finally, press POWER button ❶ to turn the power off. POWER/ON TIMER indicator ❷ remains lit to show that the ON TIMER is in operation.



Notes:

- If an invalid time is selected (for example: "17:70"), it will be rejected and the ON TIMER must be reset properly.
- After the ON TIMER has been properly set, it functions only once to turn on the TV's power. (It does not operate repeatedly every day at the same time as a serial timer.)
- Once the ON TIMER turns the TV on automatically, if the TV is not operated in any way, after 2 hours the TV will turn off automatically for safety. A single adjustment, even audio level adjustment or channel selection, will cancel this switch-off function.
- When the ON TIMER is set in combination with the OFF TIMER, program ON/OFF switching of up to 9 hours 59 minutes is possible. Set the OFF TIMER so that it will turn the power off after the ON TIMER turns the power on.

  Example

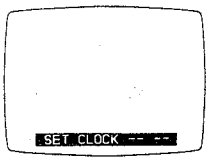
  Current time: 1:00 PM
  ON TIMER: Set to "6:00 PM"
  OFF TIMER: Set to "9:00 LATER"

  - This setting allows automatic switch-on at 6:00 PM and then, turns power off at 10:00 PM.
    (If the TV is not operated in any way after automatic switch-on, the TV will turn off automatically at "8:00 PM".)
- The accuracy of the ON TIMER is ±1 minute.

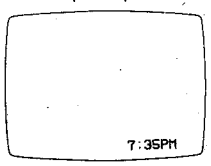
6. SET CLOCK

Your TV has a built-in clock. Set the clock as follows.

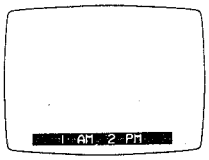
1) With "PAGE-2" (or "PAGE-1") MENU displayed on the screen, press "6" of 10-Digit Keypad ❿ . The display will show:



2) Then, press the numbers (be sure to key in 4 digits) on the Keypad to set the current time. For example, if the present time is 7:35 PM, press "0", "7", "3" and "5". Then, the display changes to:



3) Press "2" to select the "PM" setting. (Press "1" to select the "AM" setting.) Then, the display changes to the following to show the current time is set and the clock starts operating.



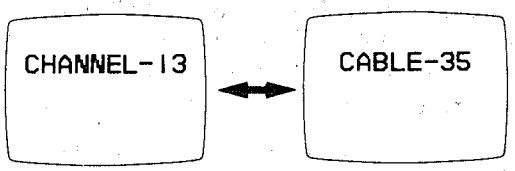
Notes:

- If an invalid time is selected (for example: "17:70"), it will be rejected and the built-in clock must be reset properly.
- If you wish to set the clock precisely in step 3) above, press "2" (or "1") at the same instant of a time signal.
- The built-in clock may loose time depending on the manner in which the TV is used or the frequency of the power source. If the time difference becomes great, re-adjust the clock.
- If power is disconnected (such as in the case of a power outage, or the like) and reapplied later, the clock will be automatically set at "1:00 AM".

MORE USEFUL FUNCTIONS

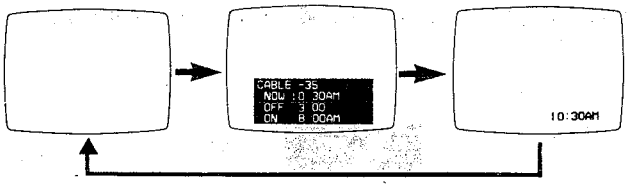
RETURN Button

Press RETURN button ⓭ on the Remote Control.
The previously viewed channel will appear on the screen.
Press RETURN again to switch back to the original channel.
Repeatedly pressing RETURN switches between these two channels.



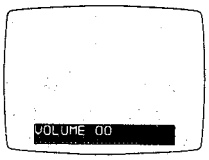
DISPLAY Button

Press DISPLAY button ❽ on the Remote Control. The channel number of the program you are now viewing, the ON/OFF TIMER settings, and the current time are displayed in the following order by each pressing of the DISPLAY button. The current time remains displayed on the screen until the DISPLAY button is pressed again.



MUTE Button

Press MUTE button ⓯ on the Remote Control.
The sound of the TV program being viewed will be decreased to minimum and "VOLUME 00" will appear on the screen. Press MUTE again (or VOLUME or CHANNEL buttons) to restore the sound.



V. HOW TO REMOVE FOR SERVICE

■ REMOVING REAR COVER

1. Unplug the power supply cord and remove the seven screws (A) shown in Fig. 1.
   * When reinstalling the rear cover, carefully push it inward after inserting the main PC board into the rear cover groove.

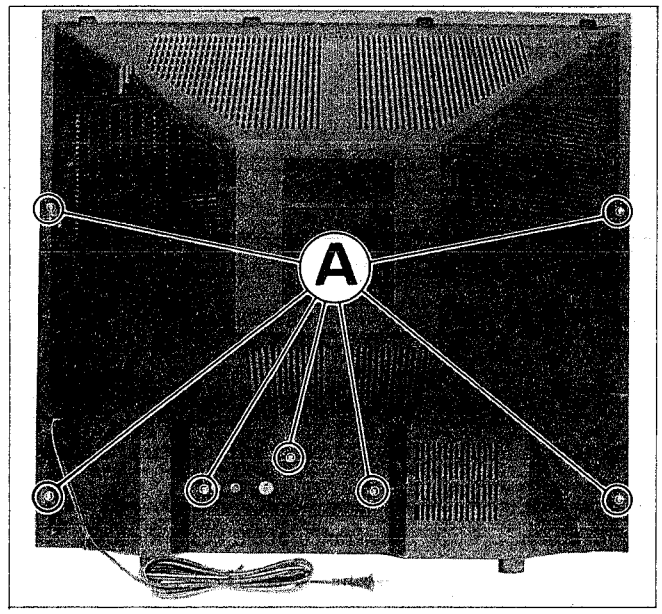


Fig. 1

■ REMOVING MAIN PC BOARD

1. Remove the two screws (B) shown in Fig. 2.
2. Pushing up the two nails (C) shown in Fig. 3.
3. Withdraw the PC Board backward along the arrow. (Fig. 3)
   * When conducting a check with power supplied, be sure to confirm that the CRT earth wire is connected to the CRT socket board and the chassis.

■ WIRE CLAMPING AND TYING BAND

1. Be sure to clamp the wire.
2. Never remove the tying band used for wire clamping. Should it be inadvertently removed, be sure to clamp the wire again, using insulating material.

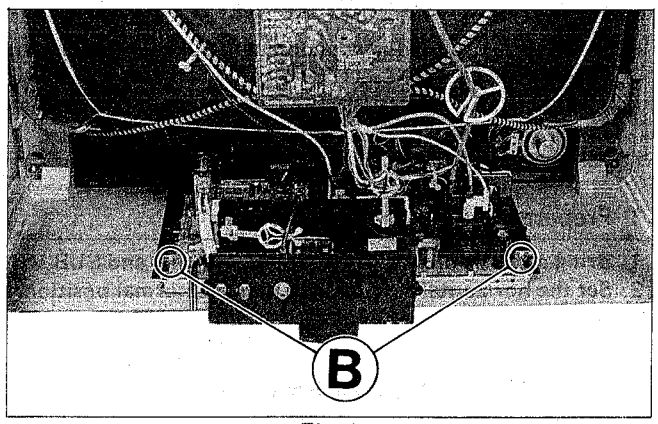


Fig. 2

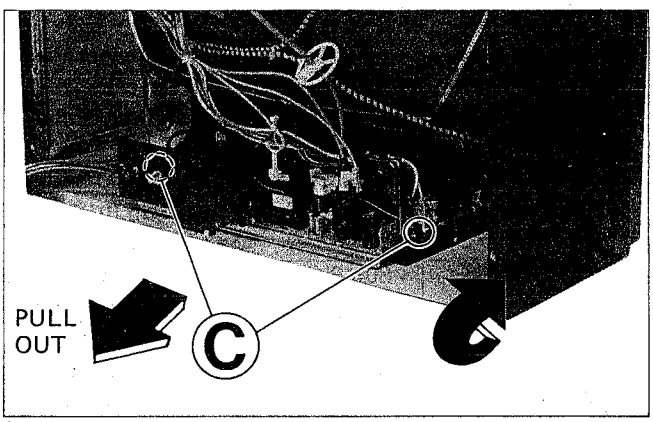


Fig. 3

VI. SERVICE ADJUSTMENT

■ HOW TO CHECK THE HIGH VOLTAGE HOLD DOWN CIRCUIT

1. High voltage hold down circuit.
   After repair of the high voltage hold down circuit shown in Fig. 1, this circuit shall be checked to operate correctly.
2. Checking method of the high voltage hold down circuit.
   (1) Make the short circuit across R906, 330 Ω 15 W UNF R (shown in Fig. 2, [ ]) under normal operating condition.
   (2) Confirm the picture goes out.

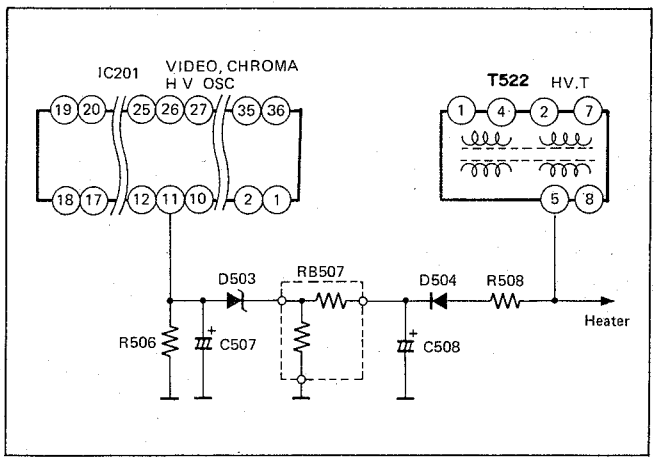


Fig. 1

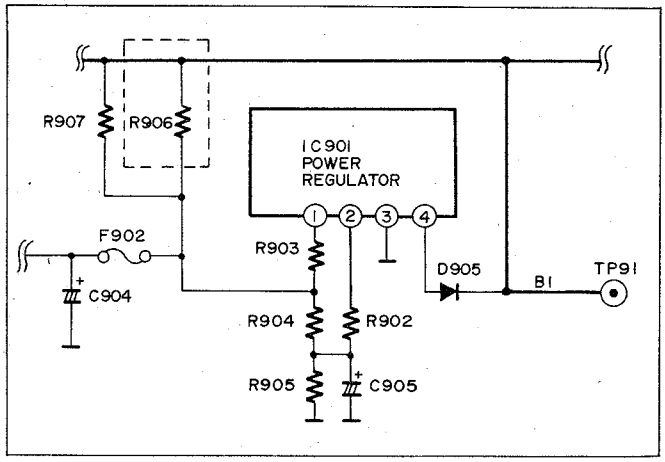


Fig. 2

■ SERVICE ADJUSTMENTS

* **Use isolation transformer when repairing (See: Safety Precaution)**

REGARDING CHROMA ADJUSTMENTS, REFER TO THE APPENDED NTSC.
AS TO THE FOLLOWING ITEMS, OBSERVE THE RESPECTIVE INSTRUCTIONS GIVEN HEREIN.

As for the test points and respective volume adjusting positions, refer to the schematic diagram and the section on "alignment locations" appearing in the same diagram.

■ NOTICE FOR APPENDED "NTSC" ADJUSTMENT

As to the following adjustment, adjust by referring to appended NTSC adjustment.
- **SAFETY PRECAUTION**
- **PURITY, CONVERGENCE AND WHITE BALANCE**

* Preparations before Adjustment

1. **Bring all positions of VR (Noise V. Height) and SUB VR (Bright, Picture) near to the center.**
2. **Set the horizontal service switch at the normal position.**
3. **Bring all positions of user VR (Bright, Picture, Color, Tint, Detail) to the center. (Function – Reset position)**

■ GENERAL ADJUSTMENT

Item	Location	Procedure	Remarks
B_1 voltage	——	Connect a tester to TP-91 and TP-E to check that voltage is as specified in the circuit diagram.	* The tester must have an internal resistance of 20 kΩ/V or above.
SUB BRIGHT	Sub Bright VR (R246)	Obtain optimum pictures by adjusting Sub Bright VR.	* Avoid excessive brightness.
SUB PICTURE	Sub Picture VR (R249)	Adjust Sub Picture VR to obtain optimum pictures.	
NOISE (RF. AGC)	Noise VR (R112)	1. Turn the Noise VR fully counter-clockwise (or clockwise) so that noise is synchronized with the pictures. 2. Then slowly turn the Noise VR clockwise (or counterclockwise) and stop it when noise disappears. 3. Change the channel, and check that no trouble is encountered.	* This adjustment should be made when noise is annoying, when such symptoms are detected as stripe-pattern interference in weak field areas, inter modulation noise in strong field areas, and horizontal stretching of pictures.
Vertical height	Vertical height VR (R428)	1. Receive a picture that enables vertical symmetry to be checked. 2. Using the vertical height VR, reduce the picture vertically. 3. Upon adjusting with the vertical height VR, return the picture to normal vertically.	* Pictures that enable vertical symmetry to be checked should be circles and crosshatches.
Focus	Focus VR	1. Adjust the focus VR to obtain clear pictures. 2. Check that pictures have been adjusted to optimum appearance in both central and peripheral areas of the screen.	

■ ADJUSTMENTS OF SIMPLIFIED P. IF/RF, AFC/S. IF

Item	Location	Procedure	Remarks
P. IF	CW Transformer (T104)	1. Receive the color bars. 2. Connect the tester to the RF. AGC terminal of the tuner. 3. Reduce the field strength so that RF. AGC voltage becomes 4 ~ 6 V. 4. Adjust the CW transformer so that RF. AGC voltage becomes minimized.	
RF. AFC	AFC Transformer (T103)	1. Receive the color bars. 2. Adjust the AFC transformer to obtain optimal pictures.	* Do not touch this transformer unless it develops trouble.
S. IF	1. S-take off transformer (T601) 2. Detector transformer (T602)	1. Receive a telecast. 2. By adjusting the detector and S-take off transformers, maximize the volume while minimizing the bass to obtain optimal sound without distortion.	

Ⅶ. REPLACEMENT PARTS LIST

■ MAIN REPLACEMENT PARTS LIST

＊ : Country of Origin

SYMBOL NO.	⚠	PART NO.	PART NAME	REMARKS	＊
CRT & TUNER					
		CE41095-00A	WEDGE ASSY	(×4)	
		A75034-B	P&C MAGNET		
DY01	⚠	CE20106-B0AKJ1	DEF YOKE		
L01	⚠	CE41329-00AJ1	DEG COIL		
TU1701	⚠	AN7042EP-A04#	TUNER		
V01	⚠	MVA66AAM03X	PICTURE TUBE		＊
VARIABLE RESISTOR					
R1112		QVPE805-202J1	V R (NOISE)	2kΩ B	
R1246		QVPA801-202	TRIM R (SUB BRIGHT)	2kΩ B	
R1249		QVPA801-103	TRIM R (SUB PICTURE)	10kΩ B	
R1428		QVPA801-102	TRIM R (V. HEIGHT)	1kΩ B	
R3104		QVPE805-502J1	V R (B CUT OFF)	5kΩ B	
R3105		QVPE805-502J1	V R (G CUT OFF)	5kΩ B	
R3106		QVPE805-502J1	V R (R CUT OFF)	5kΩ B	
R3111		QVPE805-201J1	V R (G DRIVE)	200 Ω B	
R3112		QVPE805-201J1	V R (R DRIVE)	200 Ω B	
TRANSFORMER					
T1521	⚠	A46022-BM	HOR DRIVE TRANSF		
T1522	⚠	CE41234-00C-KD	HV TRANSF		
DIODE					
D1102		RD8.2ES (B1) -Y#	ZENER DIODE		
D1201		RD7.5E (B3) #	ZENER DIODE		
D1203		MA4150 (L) -Y#	ZENER DIODE		
D1422		05AZ75#	ZENER DIODE		
D1501		MA4068 (L) -Y#	ZENER DIODE		
D1502		MA4091 (M) -Y#	ZENER DIODE		
D1503	⚠	MA4068 (N) V1-Y	ZENER DIODE		
D1532	⚠	RGP10J#	SI DIODE		
D1533	⚠	RGP10J#	SI DIODE		
D1534	⚠	RGP10J#	SI DIODE		
D1536	⚠	RH1S-LFA1#	SI DIODE		
D1714		GL-5HD23	L E D	Power	
D1794		MA4062 (M) -Y#	ZENER DIODE		
D1803		MA4051 (L) -Y#	ZENER DIODE		
D1832		MA4082 (M) -Y#	ZENER DIODE		
D1833		MA4082 (M) -Y#	ZENER DIODE		
D1841		PD49PI	PHOTO DIODE		
D1901	⚠	1S1887ALC-7#	SI DIODE		
D1902	⚠	1S1887ALC-7#	SI DIODE		
D1903	⚠	1S1887ALC-7#	SI DIODE		
D1904	⚠	1S1887ALC-7#	SI DIODE		
TRANSISTOR					
Q1522	⚠	2SD1455-07	SI TRANSISTOR	H. OUT	
Q3101	⚠	2SC3271 (N, P) #	SI. TRANSISTOR	B. OUT	
Q3102	⚠	2SC3271 (N, P) #	SI. TRANSISTOR	G. OUT	
Q3103	⚠	2SC3271 (N, P) #	SI. TRANSISTOR	R. OUT	
IC					
IC1101		M51346AP#	I. C. (M)		
IC1201		TA8601AN	I. C.		
IC1321		AN5862K#	I. C.		
IC1421	⚠	AN5521#	I C		
IC1621	⚠	AN5265#	I. C.		
IC1701		MN15266JMC-1	I C		
IC1702		MN1280-K	I. C. (M)		
IC1801		UPC1486C#	I. C.		
IC1831		MN12C25	I. C. (M)		
IC1841		UPC1490HA#	I. C.		

＊: Country of Origin

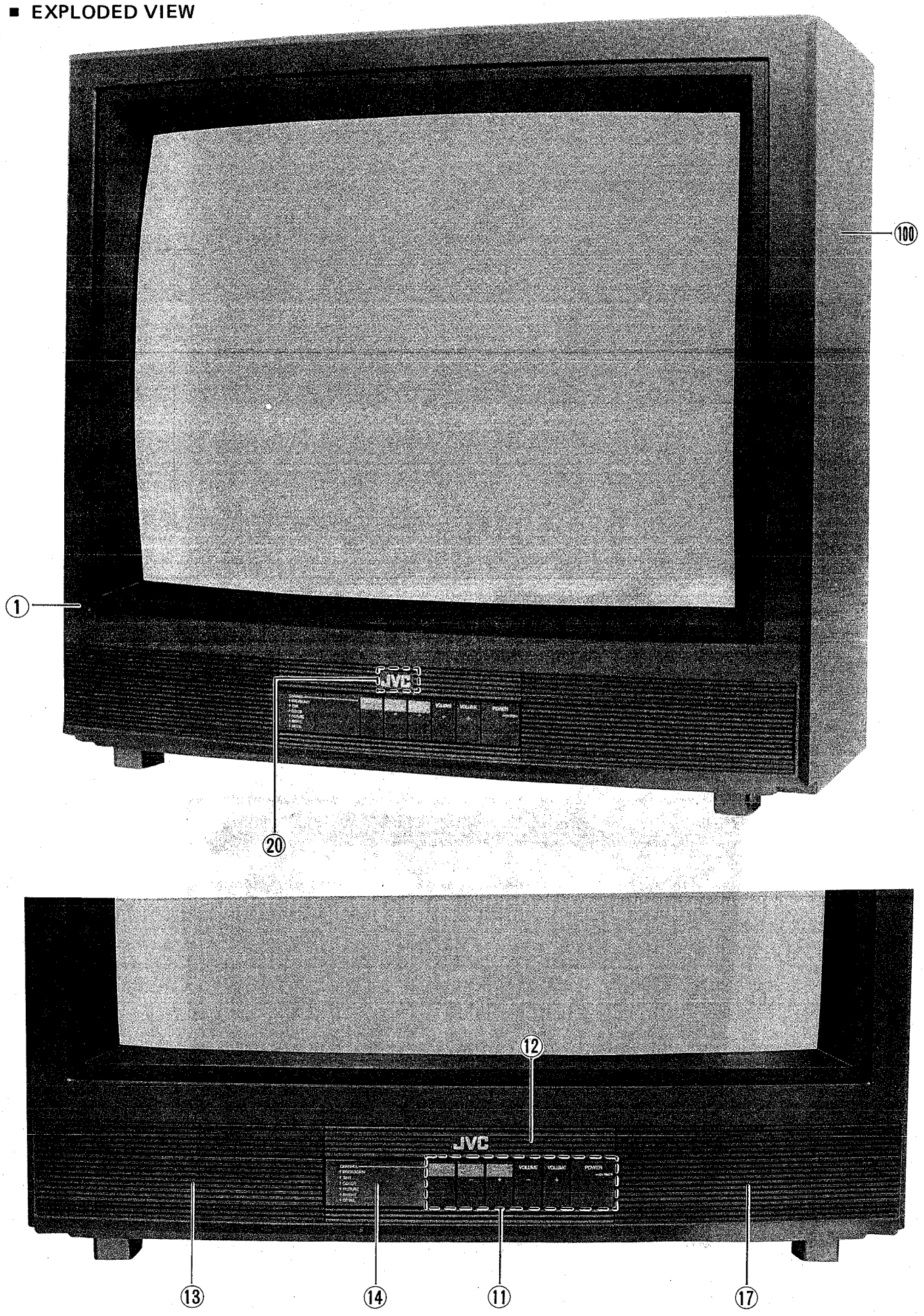
SYMBOL NO.	⚠	PART NO.	PART NAME	REMARKS	＊
IC					
IC1901	⚠	STR3130#	I. C.		
OTHERS					
	⚠	QMP1660-220J1	POWER CORD		
	⚠	CM31849-00P-KD	ANT. TERMINAL		
		CM00026-002-M0	REAR COVER		＊
		CM32396-B0B-KD	KNOB ASSY		
		CM20925-010	RATING LABEL		＊
DL1201		CE41108-001	DELAY LINE		
F1901	⚠	QMF66U1-5R0S	FUSE	5. 0A	
F1902	⚠	QMF53U1-1R25S	FUSE	1. 25A	
LF1901	⚠	CE40247-00BJ1	LINE FILTER		
RY1901	⚠	CESK006-003	RELAY		
SP01		CEBSF12D-01KJ1	CONE SPEAKER		
S1201		QSL4A13-C02	LEVER SWITCH	Service	
S1401		QSL4A13-C02	LEVER SWITCH	V. Center	
S1701		QSP1A11-C09J1	PUSH SWITCH	Function	
S1702		QSP1A11-C09J1	PUSH SWITCH	UP	
S1703		QSP1A11-C09J1	PUSH SWITCH	Down	
S1704		QSP1A11-C09J1	PUSH SWITCH	Power	
S1705		QSP1A11-C09J1	PUSH SWITCH	VOL△	
S1706		QSP1A11-C09J1	PUSH SWITCH	VOL▽	
TH1901	⚠	CE40595-001	TH POSISTOR		
X1301		A76351-D-T	X-TAL		
X1701		CE41216-001	X TAL		

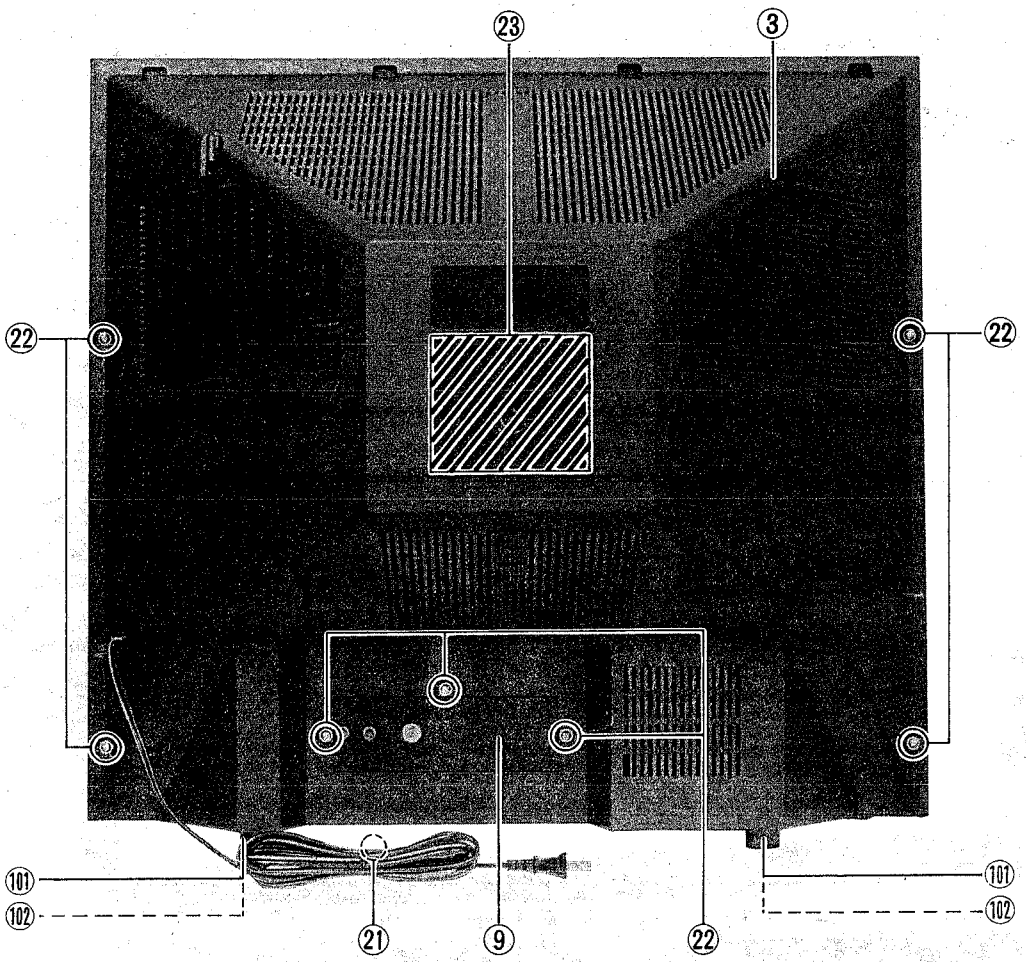
■ CHASSIS & CABINET PARTS LIST

* :Country of Origin

	VIEW NO.	SYMBOL NO.	PART NO.	PART NAME	REMARKS	*
	1		CM00025-002-M0	FRONT PANEL		*
⚠	2	V01	MVA66AAM03X	PICTURE TUBE		*
	3		CM00026-002-M0	REAR COVER		*
⚠	4	T1522	CE41234-00C-KD	HV TRANSF		
⚠	5	DY01	CE20106-B0AKJ1	DEF YOKE		
⚠	6	L01	CE41329-00AJ1	DEG COIL		
	7	SP01	CEBSF12D-01KJ1	CONE SPEAKER		
	8		CE41095-00A	WEDGE ASSY	(×4)	
⚠	9		CM31849-00P-KD	ANT. TERMINAL		
	10		A75034-B	P&C MAGNET		
	11	S1401	QSL4A13-C02	LEVER SWITCH	V. Center	
	12		CM21185-B01-KD	FRONT GRILLE		
	13		CM21206-001-KT	SP GRILLE (L)		
	14		CM32363-002	REMOCON WINDOW		
⚠	15		QMP1660-220J1	POWER CORD		
	16		CM30861-053-T	SPRING		
	17		CM21206-002-KT	SP GRILLE (R)		
	18		CH30080-00H	BRAIDED ASSY		
	19		CM42729-001	SPRING	(×2)	
	20		CM43094-004-T	JVC MARK		
	21		CM40732-001-T	CORD CLAMP		
	22		GBSA4016N-T	W TAP SCREW	(×7) Rear Cover	
	23		CM20925-010	RATING LABEL		*
⚠	24	Q1522	2SD1455-07	SI. TRANSISTOR	H. OUT	
⚠	25	TU1701	AN7042EP-A04#	TUNER		
⚠	26	F1901	QMF66U1-5R0S	FUSE	5.0A	
⚠	27	F1902	QMF53U1-1R25S	FUSE	1.25A	
	28	S1201	QSL4A13-C02	LEVER SWITCH	Service	
	29	S1701	QSP1A11-C09J1	PUSH SWITCH	Function	
	30	S1702	QSP1A11-C09J1	PUSH SWITCH	UP	
	31	S1703	QSP1A11-C09J1	PUSH SWITCH	Down	
	32	S1704	QSP1A11-C09J1	PUSH SWITCH	Power	
	33	S1705	QSP1A11-C09J1	PUSH SWITCH	Vol△	
	34	S1706	QSP1A11-C09J1	PUSH SWITCH	Vol▽	
	35	D1714	GL-5HD23	LED	Power	
	100		CN10275-00A	CABINET ASSY	Include No. 101-102	*
	101		N48003-D	TRANN LEG	(×2)	*
	102		SDSA4015Z	BIND HEAD SCREW	(×2)	*
	200		CM32396-B0B-KD	KNOB ASSY	Include No. 201	
	201		CM44268-001	LED INDICATER		

■ EXPLODED VIEW

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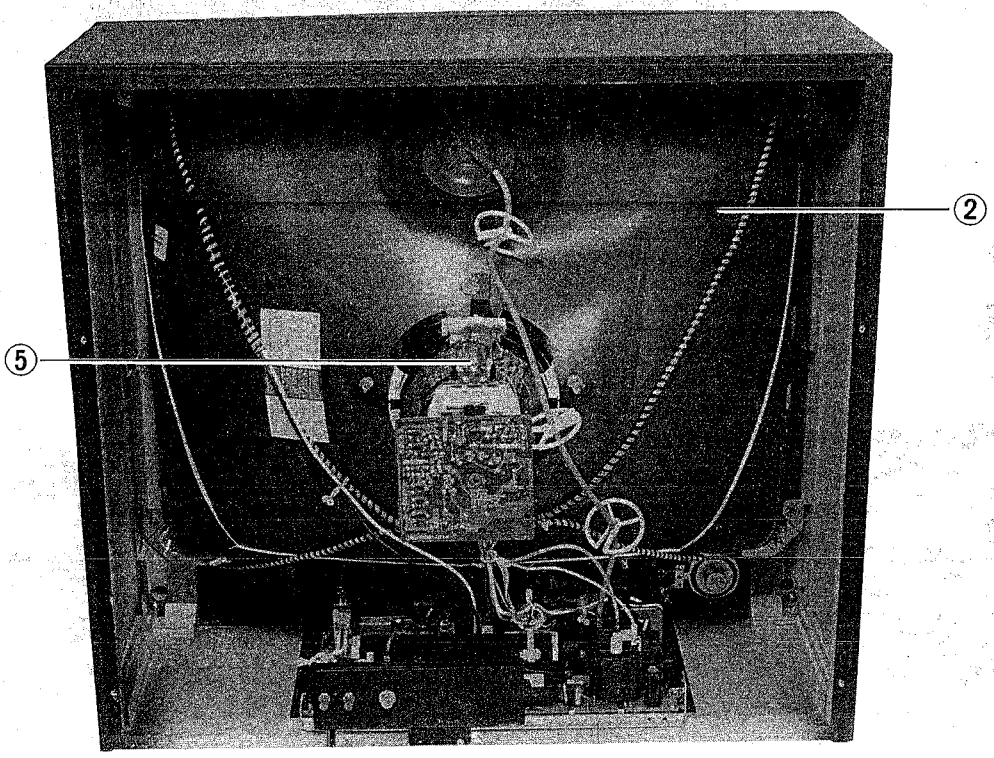
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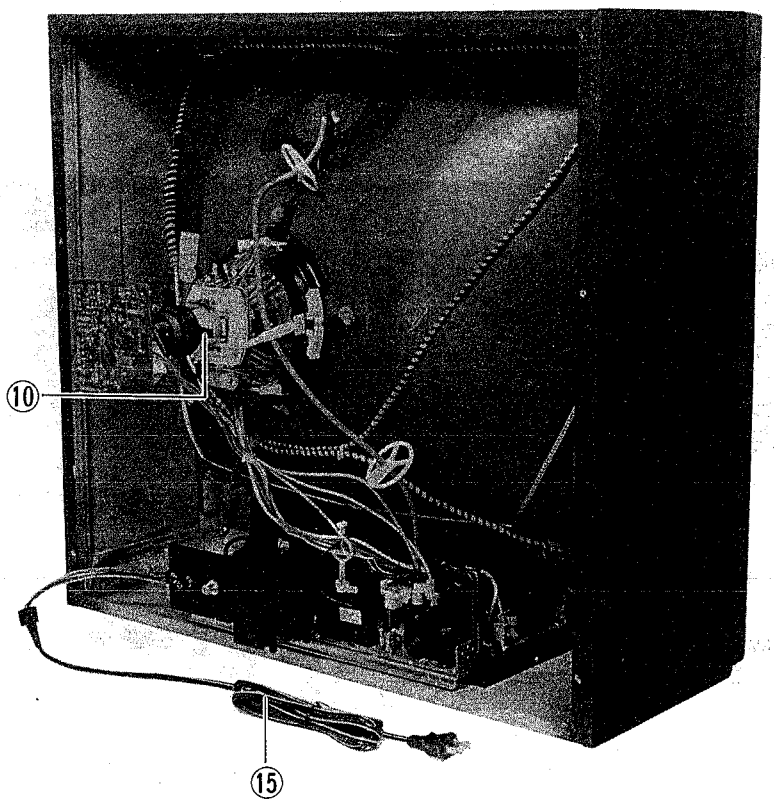
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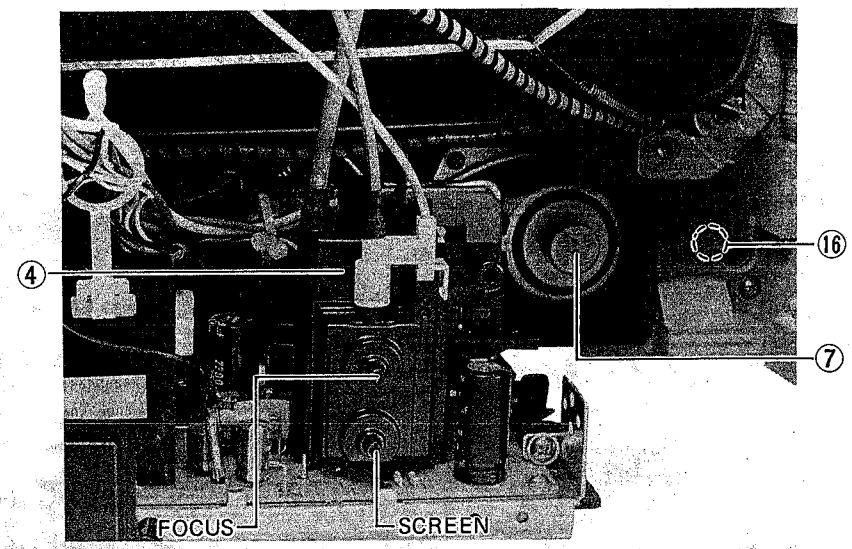
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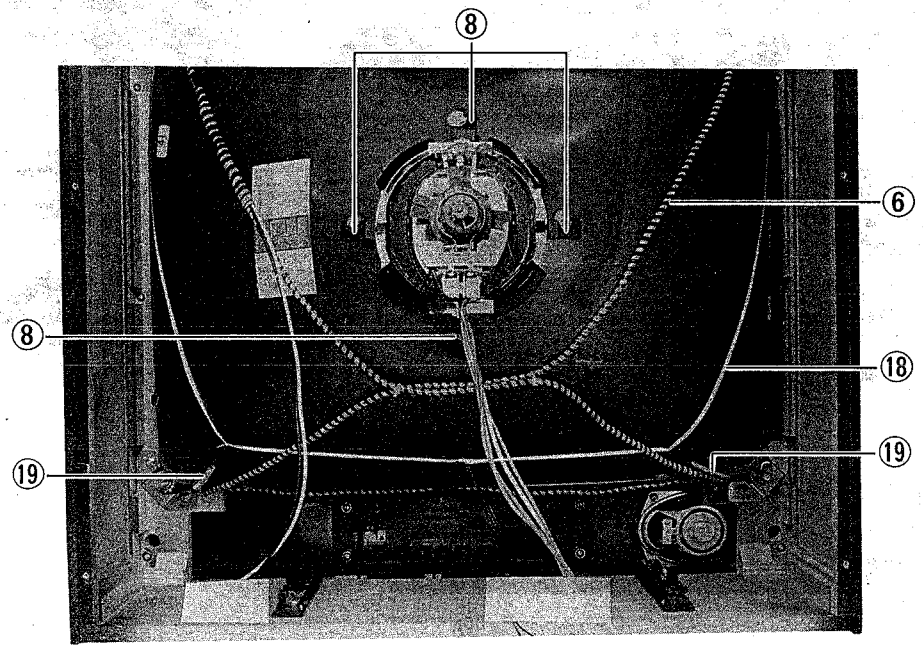
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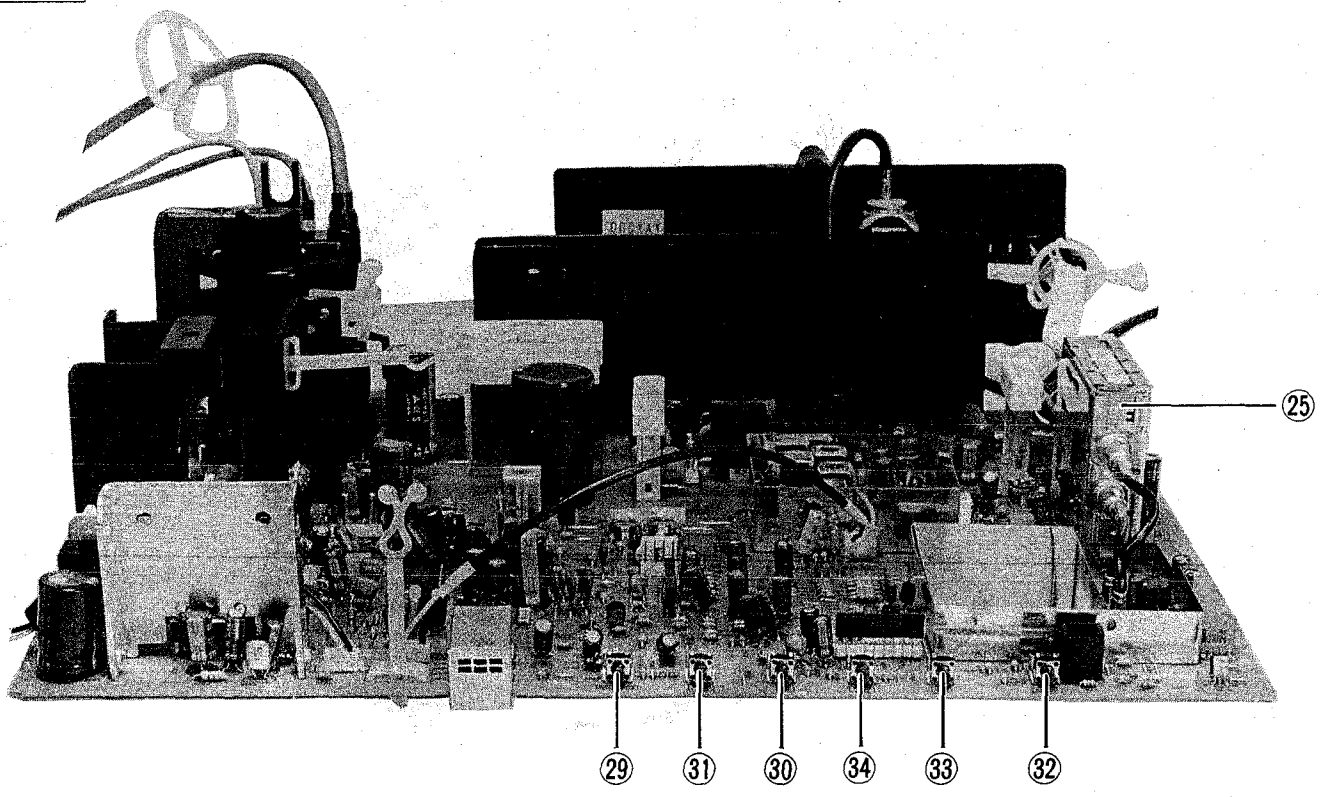
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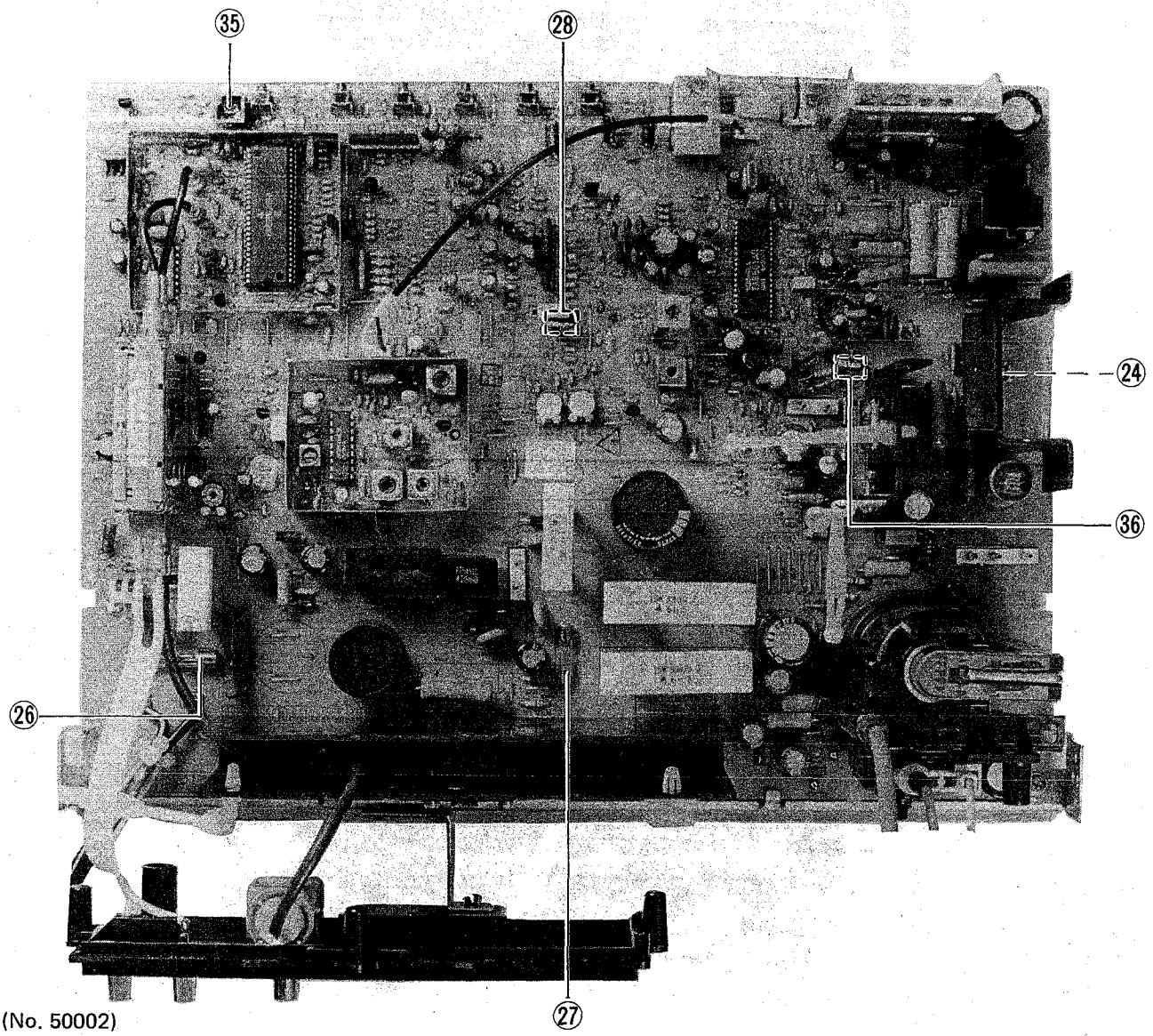
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■ PC BOARD PARTS LIST
SX-1172A(T2) (MAIN PCB ASS'Y)

	SYMBOL NO.	PART NO.	PART NAME	REMARKS
	VARIABLE RESISTOR			
	R1112	QVPE805-202J1	V R (NOISE)	2kΩ B
	R1246	QVPA801-202	TRIM R (SUB BRIGHT)	2kΩ B
	R1249	QVPA801-103	TRIM R (SUB PICTURE)	10kΩ B
	R1428	QVPA801-102	TRIM R (V. HEIGHT)	1kΩ B
	RESISTOR			
⚠	RB1507	CJ39520-00U	R BLOCK	
⚠	R1107	QRD161J-5R6YJ1	C R	
⚠	R1108	QRZ0075-560YJ1	C R	56 Ω 1/2W J
⚠	R1201	QRZ0075-330YJ1	C R	33 Ω 1/2W J
	R1217	QRZ0075-391YJ1	C R	390 Ω 1/2W J
	R1218	QRZ0075-472YJ1	C R	4.7kΩ 1/2W J
⚠	R1321	QRD161J-100YJ1	C R	10 Ω 1/6W J
⚠	R1402	QRD161J-154YJ1	C R	150kΩ 1/6W J
⚠	R1422	QRZ0075-561YJ1	C R	560 Ω 1/2W J
⚠	R1423	QRZ0075-152YJ1	C R	1.5kΩ 1/2W J
⚠	R1426	QRX019J-1R8SJ1	MF R	1.8 Ω 1W J
⚠	R1432	QRZ0075-151YJ1	C R	150 Ω 1/2W J
⚠	R1508	QRZ0075-100YJ1	C R	10 Ω 1/2W J
⚠	R1521	QRG029J-273AJ1	OM R	27kΩ 2W J
	R1523	QRZ0075-220YJ1	C R	22 Ω 1/2W J
⚠	R1524	QRZ0075-562YJ1	C R	5.6kΩ 1/2W J
⚠	R1525	QRZ0082-103	OM R	10kΩ 3W J
⚠	R1526	QRZ0081-153	OM R	15kΩ 2W J
⚠	R1527	QRZ0081-153	OM R	15kΩ 2W J
⚠	R1528	QRG029J-391AJ1	OM R	390 Ω 2W J
⚠	R1529	QRZ0082-682	OM R	6.8kΩ 3W J
⚠	R1532	QRD129J-1R8S	C R	1.8 Ω 1/2W J
⚠	R1533	QRX039J-3R3AJ1	MF R	3.3 Ω 3W J
⚠	R1534	QRX039J-3R9AJ1	MF R	3.9 Ω 3W J
⚠	R1536	QRD149J-1R0S	C R	1.0 Ω 1/4W J
⚠	R1537	QRZ0075-121YJ1	C R	120 Ω 1/2W J
⚠	R1541	QRZ0075-274YJ1	C R	270kΩ 1/2W J
⚠	R1542	QRZ0075-224YJ1	C R	220kΩ 1/2W J
⚠	R1621	QRD161J-680YJ1	C R	68 Ω 1/6W J
⚠	R1628	QRZ0075-4R7YJ1	C R	4.7 Ω 1/2W J
⚠	R1630	QRX019J-1R0SJ1	MF R	1 Ω 1W J
⚠	R1791	QRZ0075-182YJ1	C R	1.8kΩ 1/2W J
⚠	R1792	QRG019J-183SJ1	OM R	18kΩ 1W J
⚠	R1793	QRZ0080-152	UNF R	1.5kΩ 5W J
⚠	R1794	QRG029J-182AJ1	OM R	1.8kΩ 2W J
⚠	R1795	QRG029J-562AJ1	OM R	5.6kΩ 2W J
⚠	R1796	QRZ0075-474YJ1	C R	470kΩ 1/2W J
⚠	R1797	QRZ0075-333YJ1	C R	33kΩ 1/2W J
	R1820	QRG019J-121SJ1	OM R	120 Ω 1W J
⚠	R1821	QRD161J-5R6YJ1	C R	
⚠	R1824	QRG039J-103AJ1	OM R	10kΩ 3W J
⚠	R1901	QRF074K-1R8J1	UNF R	1.8 Ω 7W K
⚠	R1902	QRZ0075-221YJ1	C R	220 Ω 1/2W J
⚠	R1903	QRX039J-2R7	MF R	2.7 Ω 3W J
⚠	R1904	QRZ0075-103YJ1	C R	10kΩ 1/2W J
⚠	R1905	QRD161J-224YJ1	C R	220kΩ 1/6W J
⚠	R1906	QRF154J-331J1	UNF R	330 Ω 15W J
⚠	R1907	QRF154J-331J1	UNF R	330 Ω 15W J
	CAPACITOR			
	C1104	QETC1CM-336ZJ1	E CAP.	33μF 16V M
	C1108	QEC91HM-224M	E CAP.	0.22μF 50V M
	C1109	QFN31HJ-473ZJ1	M CAP.	0.047μF 50V J
	C1110	QCT25CH-121ZJ1	C CAP.	120pF 50V J

	SYMBOL NO.	PART NO.	PART NAME	REMARKS
	CAPACITOR			
	C1111	QCT25CH-330ZJ1	C CAP.	33pF 50V J
	C1113	QETC1CM-476ZJ1	E CAP.	47μF 16V M
	C1202	QETC1HM-105ZJ1	E CAP.	1μF 50V M
	C1203	QETC1HM-474ZJ1	E CAP.	0.47μF 50V M
	C1204	QETC1HM-474ZJ1	E CAP.	0.47μF 50V M
	C1205	QEM51EK-335M	E CAP.	3.3μF 25V K
	C1206	QETC1CM-106ZJ1	E CAP.	10μF 16V M
	C1207	QFN31HJ-103ZJ1	M CAP.	0.01μF 50V J
	C1211	QETC1EM-475ZJ1	E CAP.	4.7μF 25V M
	C1214	QFN31HJ-683ZJ1	M CAP.	0.068μF 50V J
	C1215	QETC1CM-476ZJ1	E CAP.	47μF 16V M
	C1219	QETC1CM-106ZJ1	E CAP.	10μF 16V M
	C1221	QETB1CM-108J1	E CAP.	1000μF 16V M
	C1303	QEN61HM-225ZJ1	BP E CAP.	2.2μF 50V M
	C1304	QFN31HJ-103ZJ1	M CAP.	0.01μF 50V J
	C1306	QFN31HJ-103ZJ1	M CAP.	0.01μF 50V J
	C1307	QFN31HJ-563ZJ1	M CAP.	0.056μF 50V J
	C1308	QFN31HJ-103ZJ1	M CAP.	0.01μF 50V J
	C1311	QETC1HM-474ZJ1	E CAP.	0.47μF 50V M
	C1313	QFN31HJ-473ZJ1	M CAP.	0.047μF 50V J
	C1321	QETC1CM-476ZJ1	E CAP.	47μF 16V M
	C1322	QETC1CM-106ZJ1	E CAP.	10μF 16V M
	C1323	QETC1CM-106ZJ1	E CAP.	10μF 16V M
	C1324	QETC1CM-106ZJ1	E CAP.	10μF 16V M
	C1401	QEM51HK-225M	E CAP.	2.2μF 50V K
	C1421	QFN31HJ-273ZJ1	M CAP.	0.027μF 50V J
	C1422	QCY32HK-271ZJ1	C CAP.	270pF 500V K
⚠	C1423	QETB1VM-227J1	E CAP.	220μF 35V M
	C1424	QETB1EM-228J1	E CAP.	2200μF 25V M
	C1426	QFV81HJ-334M	TF CAP.	0.33μF 50V J
	C1427	QFN31HJ-273ZJ1	M CAP.	0.027μF 50V J
	C1428	QFV71HJ-104MZ	TF CAP.	0.1μF 50V J
	C1429	QFN31HJ-563ZJ1	M CAP.	0.056μF 50V J
	C1501	QFN31HJ-223J1	M CAP.	0.022μF 50V J
	C1502	QETC1HM-225ZJ1	E CAP.	2.2μF 50V M
	C1503	QFN31HJ-392ZJ1	M CAP.	3900pF 50V J
	C1504	QFN31HJ-103ZJ1	M CAP.	0.01μF 50V J
	C1505	QETC1AM-227ZJ1	E CAP.	220μF 10V M
	C1507	QETC1CM-106ZJ1	E CAP.	10μF 16V M
⚠	C1508	QETB1VM-107J1	E CAP.	100μF 35V M
⚠	C1510	QFK52AK-224M	MM CAP.	0.22μF 100V K
⚠	C1522	QCS32HJ-181J1	C CAP.	180pF 500V J
⚠	C1523	QFN32DK-103J1	M CAP.	0.01μF 200V K
⚠	C1524	QFZ0081-1262S	MPP CAP.	12600pF 1600V ±3%
⚠	C1526	QFZ0089-564S	MPP CAP.	0.56μF 200V J
⚠	C1527	QCZ0115-331A	C. CAP.	330pF 2000V K
⚠	C1528	QCY32HK-561ZJ1	C CAP.	560pF 500V K
⚠	C1529	QCY32HK-102ZJ1	C CAP.	1000pF 500V K
⚠	C1530	QCY32HK-102J1	C CAP.	1000pF 500V K
⚠	C1532	QETB1EM-477J1	E CAP.	470μF 25V M
⚠	C1533	QETA1VM-228J1	E CAP.	2200μF 35V M
⚠	C1534	QETB1EM-477J1	E CAP.	470μF 25V M
⚠	C1535	QETB1CM-477J1	E CAP.	470μF 16V M
⚠	C1536	QET52ER-106J1	E CAP.	10μF 250V R
	C1542	QFN32DK-473J1	M CAP.	0.047μF 200V K
⚠	C1546	QCS32HJ-151J1	C CAP.	150pF 500V J
	C1603	QFN31HJ-473ZJ1	M CAP.	0.047μF 50V J
	C1605	QFN31HJ-103ZJ1	M CAP.	0.01μF 50V J

SYMBOL NO.	PART NO.	PART NAME	REMARKS
CAPACITOR			
C1606	QFN31HJ-392ZJ1	M CAP.	3900pF 50V J
C1621	QETC1CM-476ZJ1	E CAP.	47μF 16V M
C1622	QEN61HM-105ZJ1	BP E CAP.	1μF 50V M
C1623	QFN31HJ-682ZJ1	M CAP.	6800pF 50V J
C1624	QETC1EM-475ZJ1	E CAP.	4.7μF 25V M
C1625	QETC1EM-475ZJ1	E CAP.	4.7μF 25V M
C1626	QETC1CM-106ZJ1	E CAP.	10μF 16V M
C1628	QFN31HJ-473ZJ1	M CAP.	0.047μF 50V J
C1629	QETC1CM-227ZJ1	E CAP.	220μF 16V M
⚠ C1631	QETB1EM-228J1	E CAP.	2200μF 25V M
C1700	QEB51HM-104M	E CAP.	0.1μF 50V M
C1707	QFN31HJ-222ZJ1	M CAP.	2200pF 50V J
C1708	QFN31HJ-333ZJ1	M CAP.	0.033μF 50V J
C1710	QETC0JM-107ZJ1	E CAP.	100μF 6.3V M
C1712	QETC1EM-475ZJ1	E CAP.	4.7μF 25V M
C1713	QETC1EM-475ZJ1	E CAP.	4.7μF 25V M
C1714	QETC1EM-475ZJ1	E CAP.	4.7μF 25V M
C1715	QETC1EM-475ZJ1	E CAP.	4.7μF 25V M
C1716	QETC1EM-475ZJ1	E CAP.	4.7μF 25V M
C1717	QETC1EM-475ZJ1	E CAP.	4.7μF 25V M
C1718	QCNB42M-101M	CAP. BLOCK	
C1719	QCNF42Z-102M	CAP. BLOCK	
C1721	CECN001-102	CAP. BLOCK	
C1723	CECN001-102	CAP. BLOCK	
⚠ C1791	QET52ER-475J1	E CAP.	4.7μF 250V R
⚠ C1792	QETB2CM-106	E CAP.	10μF 160V M
C1804	QFV71HJ-474MZ	TF CAP.	0.47μF 50V J
C1805	QFN31HJ-683ZJ1	M CAP.	0.068μF 50V J
C1806	QETB1CM-108J1	E CAP.	1000μF 16V M
C1807	QETC0JM-107ZJ1	E CAP.	100μF 6.3V M
C1808	QETC1CM-106ZJ1	E CAP.	10μF 16V M
C1809	QFN31HJ-103ZJ1	M CAP.	0.01μF 50V J
C1810	QETC1CM-106ZJ1	E CAP.	10μF 16V M
C1811	QETC1EM-475ZJ1	E CAP.	4.7μF 25V M
C1812	QETC1CM-106ZJ1	E CAP.	10μF 16V M
C1813	QETC1HM-106ZJ1	E CAP.	10μF 50V M
C1814	QETC1HM-106ZJ1	E CAP.	10μF 50V M
C1817	QETC1EM-475ZJ1	E CAP.	4.7μF 25V M
C1819	QETC1EM-475ZJ1	E CAP.	4.7μF 25V M
C1831	QETC1CM-106ZJ1	E CAP.	10μF 16V M
C1841	QETC0JM-476ZJ1	E CAP.	47μF 6.3V M
C1842	QETC0JM-476ZJ1	E CAP.	47μF 6.3V M
C1844	QEK51HM-335GJ1	E CAP.	3.3μF 50V M
C1845	QEK51HM-224GJ1	E CAP.	0.22μF 50V M
⚠ C1901	QCZ9014-472J1	C CAP.	4700pFAC125V P
⚠ C1902	QCZ9014-472J1	C CAP.	4700pFAC125V P
⚠ C1903	QCZ9014-472J1	C CAP.	4700pFAC125V P
⚠ C1904	QEZ0110-567R	E CAP.	560μF 200V M
⚠ C1905	QET52CR-106J1	E CAP.	10μF 160V R
⚠ C1906	QFZ9025-104M	MF CAP.	0.1μFAC125V M
⚠ C1907	QFZ9025-104M	MF CAP.	0.1μFAC125V M
⚠ C1908	QET52CR-476J1	E CAP.	47μF 160V R
TRANSFORMER			
T1103	A75588-B-T	AFC TRANS	
T1104	A75899-A-T	CW TRANS.	
T1301	A75196-A-T	3.58 BP TRANS	
⚠ T1521	A46022-BM	HOR DRIVE TRANSF	
T1601	A75583-A-T	S TAKE OFF TRANS	

SYMBOL NO.	PART NO.	PART NAME	REMARKS
TRANSFORMER			
T1602	CE40121-101J1	SIF TRANSF	
COIL			
L1101	CE40143-R82	PEAKING COIL	0.82μH
L1102	CELP003-R82Z	PEAKING COIL	0.82μH
L1103	A76186-15Z-T	PEAKING COIL	15μH
L1104	A76186-1.0-T	PEAKING COIL	1.0μH
L1201	A76186-56-T	PEAKING COIL	56μH
L1202	A76186-5.6-T	PEAKING COIL	5.6μH
L1301	A76186-2.2Z-T	PEAKING COIL	2.2μH
L1521	A76186-56Z-T	PEAKING COIL	56μH
⚠ L1523	CE41124-00A	LINIARITY COIL	
L1524	CE41169-002	BEADS CODE	
L1525	CE41169-002	BEADS CODE	
L1702	CE40041-220J1	PEAKING COIL	22μH
L1703	CE40536-4R7FH	PEAKING COIL	4.7μH
L1704	CE40536-4R7FH	PEAKING COIL	4.7μH
L1705	CE40536-4R7FH	PEAKING COIL	4.7μH
L1706	CE40536-4R7FH	PEAKING COIL	4.7μH
L1707	CE40536-4R7FH	PEAKING COIL	4.7μH
L1708	A76186-2.2Z-T	PEAKING COIL	2.2μH
L1831	A76186-1.0-T	PEAKING COIL	1.0μH
DIODE			
D1102	RD8.2ES(B1)-Y#	ZENER DIODE	
D1103	1SS133-Y#	SI DIODE	
D1104	1SS133-Y#	SI DIODE	
D1201	RD7.5E(B3)#	ZENER DIODE	
D1202	1SS133-Y#	SI DIODE	
D1203	MA4150(L)-Y#	ZENER DIODE	
D1204	1SS133-Y#	SI DIODE	
D1205	1SS133-Y#	SI DIODE	
D1207	1SS133-Y#	SI DIODE	
D1208	1SS133-Y#	SI DIODE	
D1209	1SS133-Y#	SI DIODE	
D1210	1SS133-Y#	SI DIODE	
⚠ D1421	1SR35-100-F#	SI DIODE	
D1422	05AZ75#	ZENER DIODE	
D1501	MA4068(L)-Y#	ZENER DIODE	
D1502	MA4091(M)-Y#	ZENER DIODE	
⚠ D1503	MA4068(N)V1-Y	ZENER DIODE	
⚠ D1504	1SS81-Y#	SI DIODE	
⚠ D1521	RM2C-LFA1#	SI DIODE	
⚠ D1532	RGP10J#	SI DIODE	
⚠ D1533	RGP10J#	SI DIODE	
⚠ D1534	RGP10J#	SI DIODE	
⚠ D1536	RH1S-LFA1#	SI DIODE	
⚠ D1537	1SS81-Y#	SI DIODE	
D1702	1SS133-Y#	SI DIODE	
D1703	1SS133-Y#	SI DIODE	
D1704	1SS133-Y#	SI DIODE	
D1705	1SS133-Y#	SI DIODE	
D1706	1SS133-Y#	SI DIODE	
D1707	1SS133-Y#	SI DIODE	
D1710	1SS133-Y#	SI DIODE	
D1711	1SS133-Y#	SI DIODE	
D1712	1SS133-Y#	SI DIODE	
D1713	1SS133-Y#	SI DIODE	
D1714	GL-5HD23	L E D	Power
D1716	1SS133-Y#	SI DIODE	

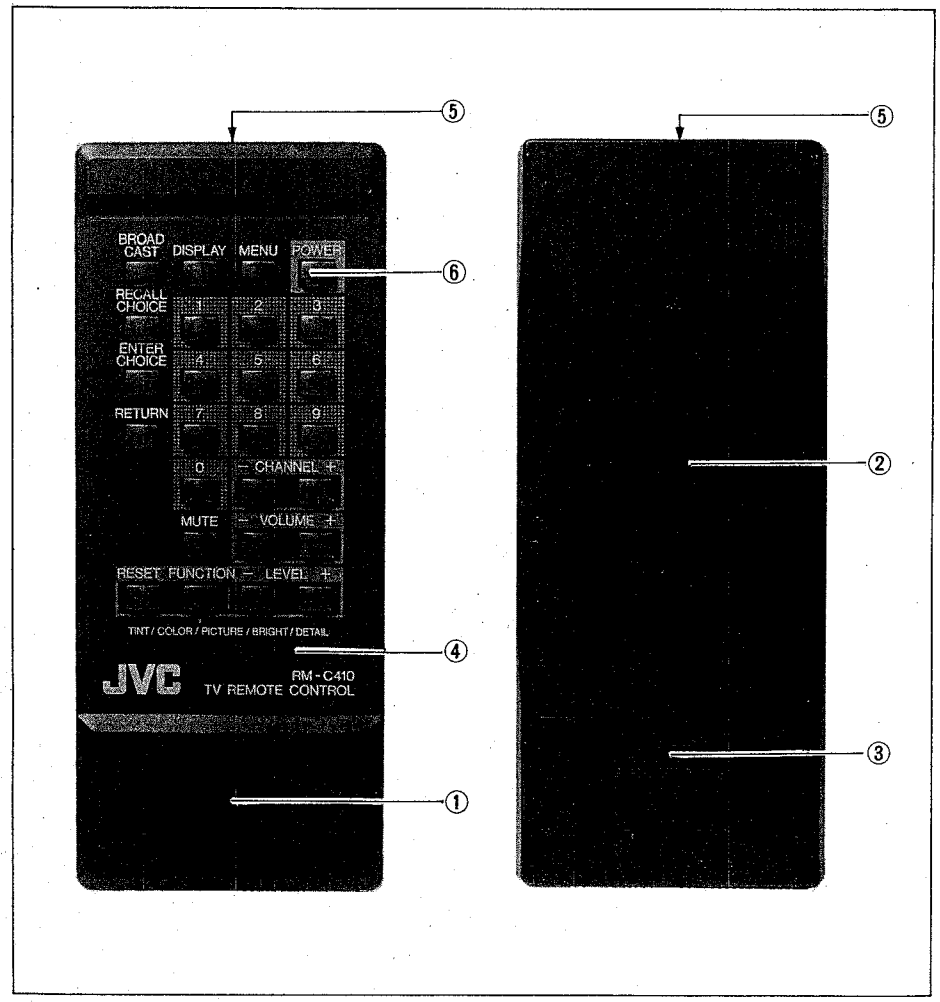
SYMBOL NO.	PART NO.	PART NAME	REMARKS
DIODE			
D1721	1SS133-Y#	SI DIODE	
D1722	1SS133-Y#	SI DIODE	
D1723	1SS133-Y#	SI DIODE	
D1724	1SS133-Y#	SI DIODE	
D1725	1SS133-Y#	SI DIODE	
D1727	1SS133-Y#	SI DIODE	
D1728	1SS133-Y#	SI DIODE	
D1730	1SS133-Y#	SI DIODE	
⚠ D1791	1SS146-Y#	SI DIODE	
⚠ D1792	1SS146-Y#	SI DIODE	
⚠ D1793	1S1887ALC-7#	SI DIODE	
D1794	MA4062 (M) -Y#	ZENER DIODE	
D1795	1SS133-Y#	SI DIODE	
D1796	1SS133-Y#	SI DIODE	
D1803	MA4051 (L) -Y#	ZENER DIODE	
D1831	1SS133-Y#	SI DIODE	
D1832	MA4082 (M) -Y#	ZENER DIODE	
D1833	MA4082 (M) -Y#	ZENER DIODE	
D1841	PD49PI	PHOTO DIODE	
⚠ D1901	1S1887ALC-7#	SI DIODE	
⚠ D1902	1S1887ALC-7#	SI DIODE	
⚠ D1903	1S1887ALC-7#	SI DIODE	
⚠ D1904	1S1887ALC-7#	SI DIODE	
⚠ D1905	1S1887ALC-7#	SI DIODE	
TRANSISTOR			
Q1101	2SC1906#	SI. TRANSISTOR	
Q1102	2SA933 (Q, R) -Y#	SI. TRANSISTOR	
Q1103	2SC1740 (Q, R) Y#	SI. TRANSISTOR	
Q1201	2SC1740 (Q, R) Y#	SI. TRANSISTOR	
Q1202	2SA933 (Q, R) -Y#	SI. TRANSISTOR	
Q1204	2SC1740 (Q, R) Y#	SI. TRANSISTOR	
⚠ Q1521	2SC2482V#	SI. TRANSISTOR	or 2SC3187
⚠ Q1522	2SD1455-07	SI TRANSISTOR	H. OUT
Q1701	2SC1740 (Q, R) Y#	SI. TRANSISTOR	
Q1702	2SC1740 (Q, R) Y#	SI. TRANSISTOR	
Q1703	2SC1740 (Q, R) Y#	SI. TRANSISTOR	
Q1704	2SC1740 (Q, R) Y#	SI. TRANSISTOR	
Q1705	2SC1740 (Q, R) Y#	SI. TRANSISTOR	
Q1706	2SA933 (Q, R) -Y#	SI. TRANSISTOR	
⚠ Q1791	2SC2073#	SI. TRANSISTOR	
Q1792	2SC3271 (N, P) #	SI. TRANSISTOR	
IC			
IC1101	M51346AP#	I. C. (M)	
IC1201	TA8601AN	I. C.	
IC1321	AN5862K#	I. C.	
⚠ IC1421	AN5521#	I C	
⚠ IC1621	AN5265#	I. C.	
IC1701	MN15266JMC-1	I C	
IC1702	MN1280-K	I. C. (M)	
IC1801	UPC1486C#	I. C.	
IC1831	MN12C25	I. C. (M)	
IC1841	UPC1490HA#	I. C.	
⚠ IC1901	STR3130#	I. C.	
OTHERS			
CF1101	CE40124-45A	CERAMIC TRAP	
CF1501	CSB503F17	C RESONATOR	
CF1601	A74603-C	CERAMIC FILTER	

SYMBOL NO.	PART NO.	PART NAME	REMARKS
OTHERS			
DL1201	CE41108-001	DELAY LINE	
⚠ F1901	QMF66U1-5R0S	FUSE	5.0A
⚠ F1902	QMF53U1-1R25S	FUSE	1.25A
⚠ LF1901	CE40247-00BJ1	LINE FILTER	
⚠ RY1901	CESK006-003	RELAY	
SF1101	CE40953-201	SAW FILTER	
S1201	QSL4A13-C02	LEVER SWITCH	Service
S1401	QSL4A13-C02	LEVER SWITCH	V. Center
S1701	QSP1A11-C09J1	PUSH SWITCH	Function
S1702	QSP1A11-C09J1	PUSH SWITCH	UP
S1703	QSP1A11-C09J1	PUSH SWITCH	Down
S1704	QSP1A11-C09J1	PUSH SWITCH	Power
S1705	QSP1A11-C09J1	PUSH SWITCH	VOL△
S1706	QSP1A11-C09J1	PUSH SWITCH	VOL▽
⚠ TH1901	CE40595-001	TH POSISTOR	
⚠ TU1701	AN7042EP-A04#	TUNER	
X1301	A76351-D-T	X-TAL	
X1701	CE41216-001	X TAL	

SX-3046A(T2) (CRT SOCKET PCB ASS'Y)

SYMBOL NO.	PART NO.	PART NAME	REMARKS
VARIABLE RESISTOR			
R3104	QVPE805-502J1	V R (B CUT OFF)	5kΩ B
R3105	QVPE805-502J1	V R (G CUT OFF)	5kΩ B
R3106	QVPE805-502J1	V R (R CUT OFF)	5kΩ B
R3111	QVPE805-201J1	V R (G DRIVE)	200 Ω B
R3112	QVPE805-201J1	V R (R DRIVE)	200 Ω B
RESISTOR			
⚠ R3113	QRG029J-153AJ1	OM R	15kΩ 2W J
⚠ R3114	QRG029J-153AJ1	OM R	15kΩ 2W J
⚠ R3115	QRG029J-153AJ1	OM R	15kΩ 2W J
⚠ R3116	QRC122K-332	COMP. R	3.3kΩ 1/2W K
⚠ R3117	QRC122K-332	COMP. R	3.3kΩ 1/2W K
⚠ R3118	QRC122K-332	COMP. R	3.3kΩ 1/2W K
⚠ R3125	QRD161J-154YJ1	C R	150kΩ 1/6W J
CAPACITOR			
⚠ C3107	QCZ0121-102J1	C CAP.	0.001μF 3000V P
COIL			
⚠ L3101	QQL043K-181	PEAKING COIL	180μH
⚠ L3102	CJ30030-038	HEATER CHOKE	
DIODE			
D3101	1SS83FA#	SI DIODE	
D3102	1SS83#	SI DIODE	
D3103	1SS83#	SI DIODE	
TRANSISTOR			
⚠ Q3101	2SC3271 (N, P) #	SI. TRANSISTOR	B. OUT
⚠ Q3102	2SC3271 (N, P) #	SI. TRANSISTOR	G. OUT
⚠ Q3103	2SC3271 (N, P) #	SI. TRANSISTOR	R. OUT
OTHERS			
⚠	A75522-H	CRT SOCKET	

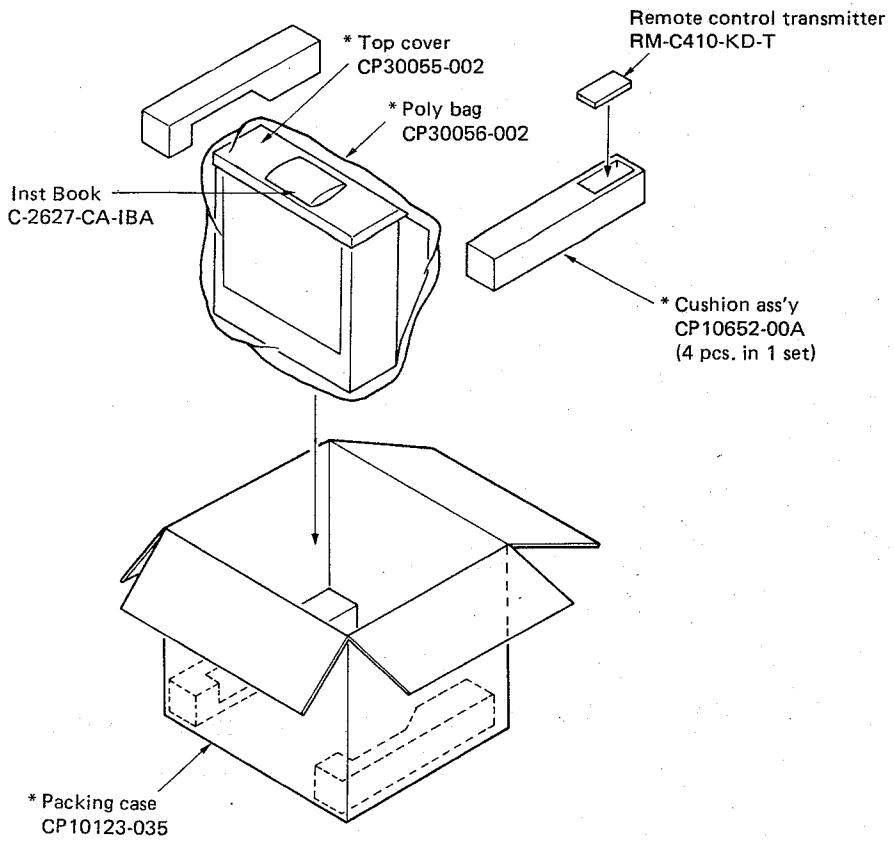
■ REMOTE CONTROL TRANSMITTER (RM-C410-KD-T)



VIEW NO.	SYMBOL NO.	⚠	PART NO.	PART NAME	REMARK
1			UR64CS119	Front Case	
2			UR64CS120	Bottom Case	
3			UR64EC121	Battery Cover	
4			UR64PP404A	Panel	
5			UR64SB125	Filter	
6			UR64BT123B	Button	(x26)

Ⅷ. PACKING DIAGRAM

* : Country of Origin



ATTACHED MATTERS

SVC Center List BT-20071A
Warranty Card BT-20025J
Rod Antenna CM31850-00B-T
UHF Loop Antenna A31284-FS-T
75 Ω Conv. Adaptor CE40128-002J1

Shield Ant. Box CE41347-002

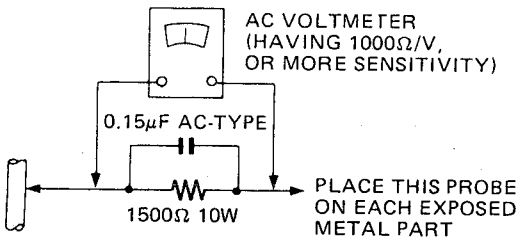
SAFETY PRECAUTION

1. The design of this product contains special hardware, many circuits and components specially for safety purposes.
   For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of receiver should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in television sets have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of Service manual. **Electrical components having such features are identified by shading on the schematics and by (⚠) on the parts list in Service manual.** The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list in Service manual many create shock, fire, or other hazards.
4. **Use isolation transformer when hot chassis.**
   The chassis and any sub-chassis contrained in some product are connected to one side of the AC power line. An isolation transformer of adequate capacity should be inserted between the product and the AC power supply point while performing any service on some product when the HOT chassis is exposed.
5. **Don't short between the LIVE side ground and NEUTRAL side ground when repairing.**
   Some model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE (primary: ⊥) side GND and the NEUTRAL (secondary: ⏚) side GND.
   Don't short between the LIVE side GND and NEUTRAL side GND or never measure with a measuring apparatus (oscilloscope etc.) the LIVE side GND and NEUTRAL side GND at the same time.
   If above note will not be kept, a fuse or any parts will be broken.
6. If any repair has been made to the chassis, it is recommended that the B_1 setting should be checked or adjusted (See ADJUSTMENT OF B_1 VOLTAGE).
7. The high voltage applied to the picture tube must conform with that specified in Service manual. Excessive high voltage can cause an increase in X-Ray emission, arcing and possible component damage, therefore operation under excessive high voltage conditions should be kept to a minimum, or should be prevented. If severe arcing occurs, remove the AC power immediately and determine the cause by visual inspection (incorrect installation, cracked or melted high voltage harness, poor soldering, etc.). To maintain the proper minimum level of soft X-Ray emission, components in the high voltage circuitry including the picture tube must be the exact replacements or alternatives approvided by the manufacturer of the complete product.
8. Do not check high voltage by drawing an arc. Use a high voltage meter or a high voltage probe with a VTVM. Discharge the picture tube before attempting meter connection, by connecting a clip lead to the ground frame and connecting the other end of the lead through a 10kΩ 2W resistor to the anode button.
9. When service is required, observe the original lead dress. Extra precaution should be given to assure correct lead dress in the high voltage circuit area. Where a short circuit has occurred, those components that indicate evidence of overheating should be replaced. Always use the manufacturer's replacement components.
10. **Isolation Check**
    (Safety for Electrical Shock Hazard)
    After re-assembling the product, always perform an isolation check on the exposed metal parts of the cabinet (antenna terminals, channel selector knobs, metal cabinet, screwheads, earphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.

(1) **Dielectric Strength Test**
The isolation between the AC primary circuit and all metal parts exposed to the user, particularly any exposed metal part having a return path to the chassis should withstand a voltage of 1,100V AC (r.m.s.) for a period of one second.
(. . . . . Withstand a voltage of 1,100V AC (r.m.s.) to an appliance rated up to 120V, and 3,000V AC (r.m.s.) to an appliance rated 200V or more, for a period of one second.)
This method of test requires a test equipment not generally found in the service trade.

(2) **Leakage Current Check**
Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground (water pipe, etc.). Any leakage current must not exceed 0.5mA AC (r.m.s.).

- **Alternate Check Method**
  Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500Ω 10W resistor paralleled by a 0.15μF AC-type capacitor between an exposed metal part and a known good earth ground (water pipe, etc.).
  Measure the AC voltage across the resistor with the AC voltmeter.
  Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.35V AC (r.m.s.). This corresponds to 0.5mA AC (r.m.s.).



11. **High voltage hold down circuit check.**
    After repair of the high voltage hold down circuit, this circuit shall be checked to operate correctly.
    See item **"How to check the high voltage hold down circuit".**

PURITY, CONVERGENCE AND WHITE BALANCE

*** The locations of SERVICE SWITCH, SCREEN VR, CUT-OFF VR and DRIVE VR are described in the ALIGNMENT LOCATION of the schematic diagram.**

PICTURE TUBE

The picture tube is a precision in-line gun type. For this picture tube, dynamic convergence is carried out by a precision deflection yoke which eliminated the use of convergence yoke and convergence circuit. The adjustment of picture tube is therefore made easier as only the adjustment of static convergence by using a magnetic is enough. The deflection yoke and purity/convergency magnets assembly has been set at the factory and requires no field adjustments.
However, should the assembly be accidentally jarred or tampered with, some or all adjustments may be necessary.

COLOR PURITY & VERTICAL CENTER

Loosen yoke retaining screw (Fig. B-1). With a sharp knife cut between the picture tube and the bond. Remove wedges completely and clean off dried adhesive from the picture tube. PAINT is used to lock the tabs of the purity/convergence magnet assembly in place (Fig. B-1). The paint must be removed with the end of a screwdriver before any adjustments are attempted.

As to models equipped with a magnet locking ring, beforhand loosen it.

1. Select no signal UHF channel.
2. Let the purity tabs come in line horizontally as is shown in Fig. B-2. A long tab should be in the same direction as the other short tab.
3. Move the yoke slowly backward.
4. Turn the GREEN CUT-OFF VR to maximum and the RED and BLUE CUT-OFF VR to minimum. Then adjust the SCREEN VR so that the green band can be seen best. (Fig. B-3.)
5. Rotate the two tabs in the opposite directions and with them kept at an angle, together in either direction so that the green band is centered on the picture tube.
6. Check the vertical center position by displaying a horizontal line. Unless correct, bring it to the center by rotating the two tabs, kept at an angle, together in either direction. (Fig. B-4)
7. Repeat steps 5 and 6 alternately until the green band and the vertical center come to the center.
8. Move the yoke slowly towards the bell of the tube so that the whole surface of the picture tube is filled with a green pure raster.
9. Turning RED or BLUE CUT-OFF VR to maximum and GREEN CUT-OFF VR to minimum, make sure of a red or blue pure raster.
10. Secure yoke retaining screw (do not install wedges at this time).

As to models equipped with a magnet locking ring, secure it and keep six magnets from moving even if it is touched slightly.

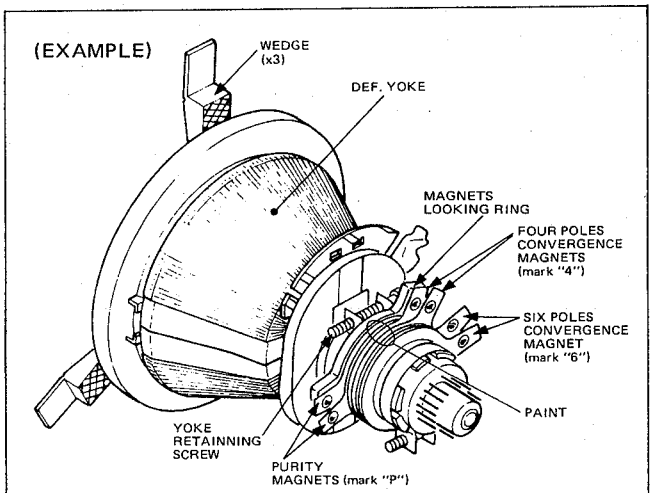


Fig. B-1

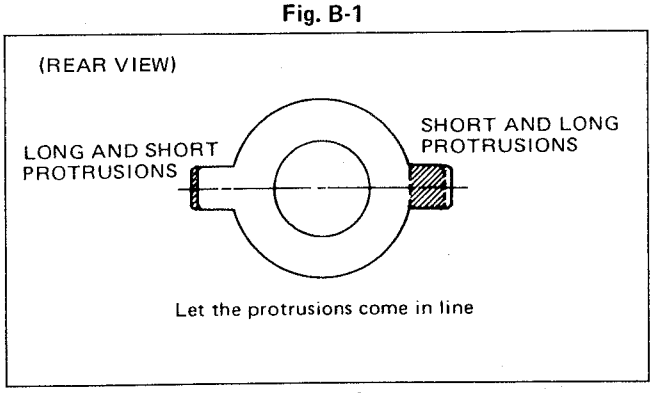


Fig. B-2

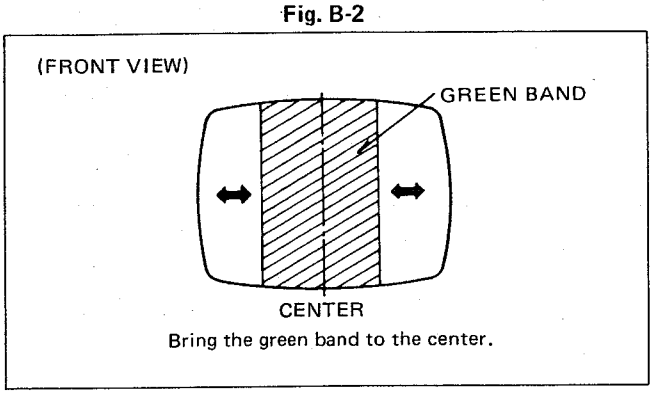
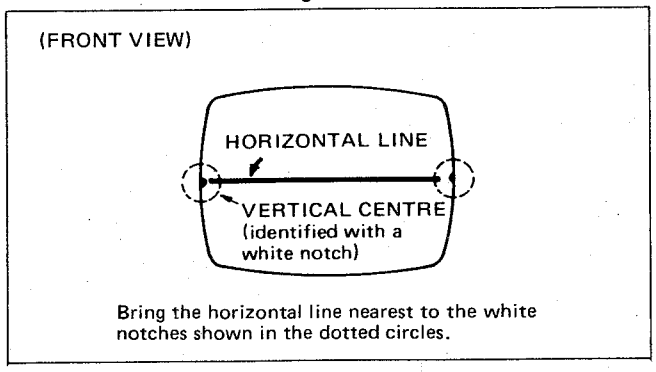


Fig. B-3


(FRONT VIEW)
HORIZONTAL LINE
VERTICAL CENTRE (identified with a white notch)
Bring the horizontal line nearest to the white notches shown in the dotted circles.

STATIC CONVERGENCE & DYNAMIC CONVERGENCE

1. Connect a crosshatch generator to the antenna terminals and adjust BRIGHTNESS and CONTRAST control for a distinct pattern.
2. Adjust the convergence around the edges of the picture tube by tilting the yoke, up-down and left-right, and temporarily install one wedge at the top of the yoke. (Fig. B-7, 8, 9)
3. Rotate the front pair of tabs (four pole convergence magnet) as a unit to minimize the separation of the red and blue lines around the center of the screen. To adjust the convergence of red and blue, vary the angle between the tabs. (Fig. B-5)
4. Rotate the rear pair of tabs (six pole convergence magnets) as a unit to minimize the separation of the magenta (R/B) and green lines. (Fig. B-6)
5. Adjust the spacing of the rear tabs to converge the magenta and green lines.
6. Apply paint to fix six magnets
   As to models equipped with a magnet locking ring, tighten it.
7. Remove the wedge installed temporarily on the yoke.
8. Tilting the angle of the yoke up, down and sideways, and adjust the yoke so as to obtain the circumference convergence. (Fig. B-8, 9)
9. Insert three wedges to the position as shown in Fig. B-10 to obtain the best circumference convergence.
10. Wedge has a backing of double sided adhesive tape. Therefore, tear off one side of adhesive tape, and fix the wedges.
11. White balance adjustment (Black & White tracking) can now be performed.

WHITE BALANCE ADJUSTMENT (Black and White Tracking)

1. Display a monochrome pattern.
2. Set the RED and GREEN DRIVE VR for their mechanical center.
3. Turn the RED, GREEN and BLUE CUT-OFF VRs and the SCREEN VR fully counterclockwise.
4. Display a horizontal line. (refer to "HORIZONTAL LINE")
5. Turn SCREEN VR slowly clockwise until a very faint horizontal line appears.
6. Turn the CUT-OFF VRs of the color which has appeared first, clockwise by about 10° and then adjust the SCREEN VR again so that the color may shine faintly.
7. Turn the other color CUT-OFF VRs slowly clockwise until a reasonable white line appears.
8. Return the monochrome pattern. (refer to "HORIZONTAL LINE")
9. Adjust the RED and GREEN DRIVE VRs for best white highlights.

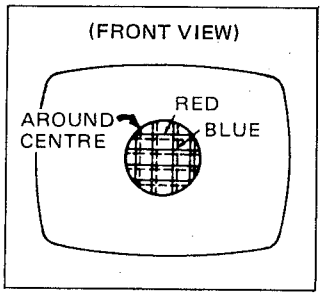


Fig. B-5

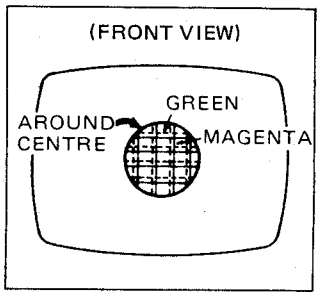


Fig. B-6

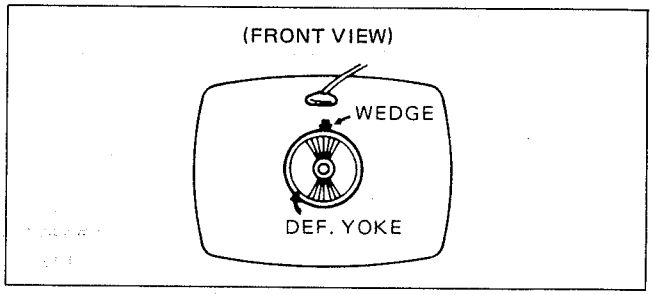


Fig. B-7

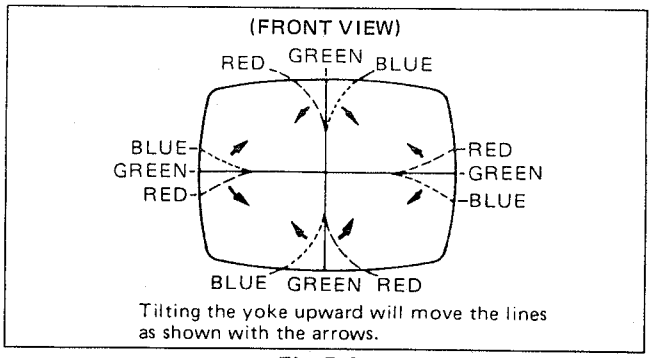


Fig. B-8

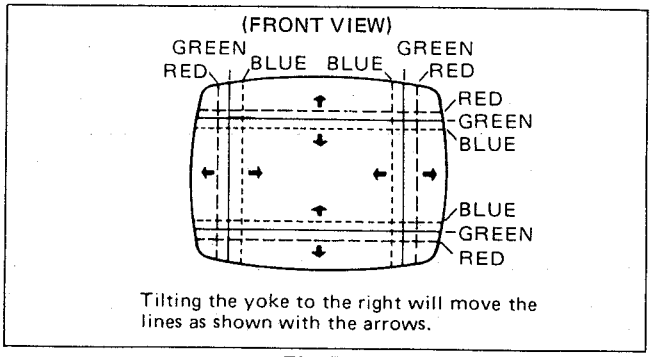


Fig. B-9

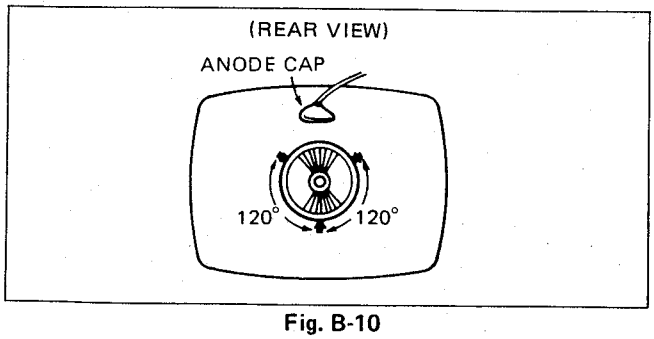


Fig. B-10

SERVICE ADJUSTMENTS

*** ADJUSTMENTS EXCEPT THE FOLLOWING DESCRIPTION ARE MENTIONED IN THE SERVICE MANUAL TEXT.**
*** SOME ITEM OF ADJUSTMENT METHOD IS NOT APPLICABLE TO SOME MODEL. IN SUCH A CASE OMIT THE ITEM.**
* Adjustments except the following description are mentioned in the service manual text.
* Use the undermentioned adjustment methods after repair or for readjustment of misadjustment.
* The locations of the under mentioned adjustment parts are described in the "Alignment Location" of the Schematic Diagram.
* Test point pins are not indicated in the printed circuit board, but in the Schematic Diagram under certain circumstances. In this case, look for test points, which are indicated in the Schematic Diagram, on the printed circuit board; and use it for test points even if there are not test point pins.

B_1 VOLTAGE

Confirm that B_1 voltage exists between TP-91 and GND.

NOTE

1. Some model's power circuit is partly different in the GND.
   The difference of the GND is shown by the LIVE (primary: ⊥) side GND and NEUTRAL (secondary: ⏚) side GND.
   In this case, use a suitable ground by checking whether LIVE side GND or NEUTRAL side GND in each schematic diagram.
2. **Use isolation transformer when hot chassis.**
   The chassis and any sub-chassis contained in some product are connected to one side of the AC power line. An isolation transformer of adequate capacity should be inserted between the product and the AC power supply point while performing any service on some product when the HOT chassis is exposed.
3. The tester used should be periodically calibrated at 20kΩ/V.

SUB CONTRAST AND SUB BRIGHT

1. Set the CONTRAST, BRIGHT, PICTURE, and the COLOR knobs to the central position respectively (where they click).
   If STANDARD BUTTON provided, press it.
   (If EE SWITCH provided, Select the EE SWITCH OFF.)
2. Then align both the SUB CONTRAST VR and SUB BRIGHT VR until an ideal picture is obtained.

BLACK LEVEL AND SUB BRIGHT

- BLACK LEVEL and SUB BRIGHT VR are correlated. Do not adjust them carelessly.

1. Set the CONTRAST, BRIGHT, PICTURE and the COLOR knobs to the central position respectively (where they click).
   If STANDARD BUTTON provided, press it.
   (IF EE SWITCH provided, select the EE SWITCH OFF.)
2. Turn the BLACK LEVEL VR fully clockwise.
   Receive a high-contrast picture and adjust brightness with the SUB BRIGHT VR in the usual way.
   (Turn the SUB BRIGHT VR while observing vertical flyback line; stop turning it just before vertical flyback line turns black.)
3. Turn the BLACK LEVEL VR counterclockwise, and adjust it so that black objects appear pute black and vivid.
4. Confirm the adjusted status on every channel.

SUB TINT AND SUB COLOR

1. Set the CONTRAST, BRIGHT, PICTURE and the COLOR knobs to the central position respectively (where they click).
   If STANDARD BUTTON provided, press it.
   (If EE SWITCH provided, select the EE SWITCH OFF.)
2. Adjust the SUB TINT VR and SUB color VR to obtain human skin natural color.

SUB PICTURE

1. Set the CONT., BRIGHT, PICTURE and the COLOR knobs to the central position respectively (where they click).
   * If STANDARD BUTTON provided, press it. (If EE switch provided, select the EE SW, OFF).
2. Adjust the SUB PICTURE VR until an ideal picture is obtained.

3.58 MHz TRAP

1. Connect a color bar generator to the antenna terminal.
2. Connect oscilloscope probe to DELAY LINE output side.
3. Adjust the 3.58 MHz TRAP (T201) so that the 3.58 MHz signal is minimized. (Fig. C-1)

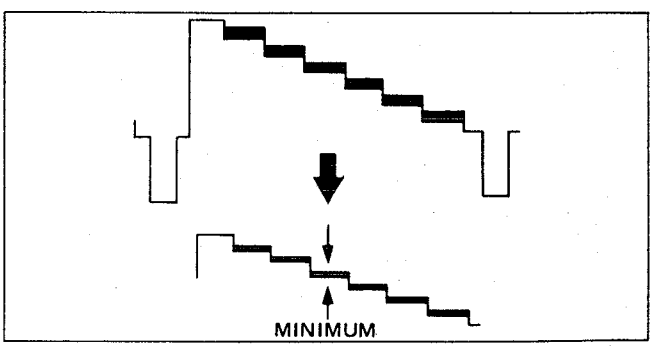


Fig. C-1

* Some item of adjustment method is NOT applicable to some model. In such a case omit the item.
* Adjustments except the following description are mentioned in the service manual test.
* Use isolation transformer when HOT chassis.

COMB FILTER

1. Connect a color bar generator to the antenna terminal.
2. Connect an oscilloscope to COMB FILTER "Y" output position (TP-42). Magnify the color signal portions of the color bar waveform so that the 3.58 MHz elements become easy to observe.
3. Adjust PHASE Transf. (T201 and T202), and minimize the 3.58 MHz elements.
4. Regulate the COMB FILTER adjustment VR to further minimize the 3.58 MHz elements. (Fig. C-1)
5. Repeat steps 3 and 4 to fully minimize the 3.58 MHz elements. (Fig. C-1)

VERTICAL HEIGHT AND LINEARITY

1. Set color bar generator to crosshatch or a pattern with which symmetry can be checked.
2. Reduce the vertical size with the VERTICAL HEIGHT VR.
3. Adjust the vertical symmetry with the VERTICAL LINEARITY VR.
4. Readjust the VERTICAL HEIGHT so that the picture extends to normal size.

VERTICAL HEIGHT

1. Set the color bar generator to crosshatch or pattern with which symmetry can be checked.
2. Adjust the vertical symmetry with the VERTICAL HEIGHT VR.

NOISE (RF A.G.C. Delay)

This control is set at the factory and rarely requires any adjustment. If a snowy picture appears on a medium to weak station adjust the noise control.

1. Turn control fully clockwise (or counterclockwise), maximum noise in picture.
2. Slowly turn VR counterclockwise (or clockwise) until snow or noise in picture just disappears.

   Note: Check operation on strong channels. If overloading occurs (bending, poor color, loss of color sync, etc.) make compromise adjustment.

4.5 MHz TRAP

1. Tune in a local color station preferably a program with the least amount of movement and continuous audio.
2. Adjusting the V. IF DET. OUT Transf. (T105) so that beating with sound signal disappears.

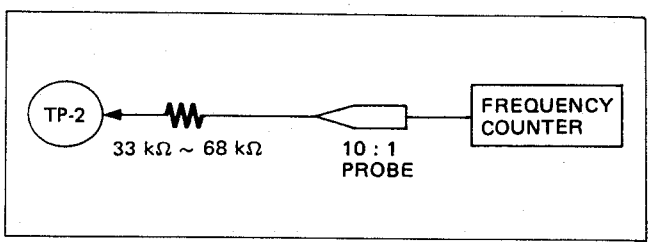
HORIZONTAL WIDTH

Adjust H. WIDTH control coil by turning it with a hexagonal adjusting bar only if RIGHT and LEFT sides of pictures can't be seen.

FOCUS

Adjust FOCUS VR for best overall definition and picture detail at normal brightness and contrast.

REFERENCE FREQUENCY OSCILLATOR



Connect as shown above and adjust C205 (ceramic trimmer capacitor) so that the oscillation frequency is 4500.000 kHz ± 20 Hz or receive UHF AIR at AFC OFF position and adjust C205 so that the AIR becomes just tuning.

HORIZONTAL OSCILLATOR

1. Set the H. FREQ. VR to the mechanical center position.
2. Connect the jumper clip between TP-33B and earth.
3. Adjust the H. FREQ. VR until picture is in view and locks or drift slowly back and forth.
4. Remove the jumper clip.
5. Make sure that the set maintains horizontal sync, when channels are switched.

COLOR SYNC.

1. Receive a color bar signal.
2. Connect two jumper wires between TP-50 and TP-E and between TP-51A and TP-51B.
3. While rotating a TRIMMER CONDENSER using a non-metallic screwdriver, adjust it until the horizontal striped patterns with color become stationary or are slowly moving.
4. Remove jumper clips.
5. Confirm that color sync is not disrupted when channels are switched.

H. CENTER

Centering is completed at the factory, although it may become distorted when CRT is changed.

In such case, selecting the H. CENTER SWITCH moves the picture left or right.

(Some model have H. CENTER TIP.)

VERTICAL CENTER

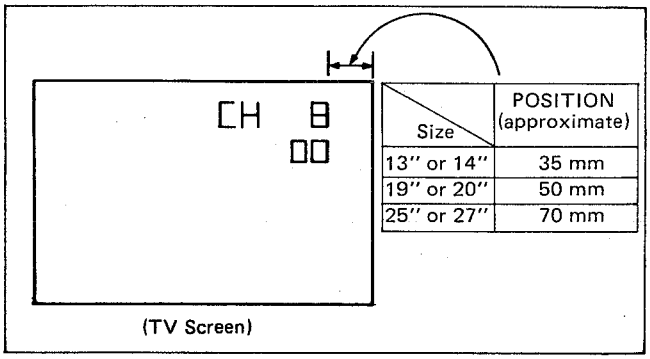
Centering is completed at the factory, although it may become distorted when CRT is changed.

In such case, selecting the V. CENTER SWITCH moves the picture up or down. (Some model have V. CENTER TIP).

* Some item of adjustment method is NOT applicable to some model. In such a case omit the item.
* Adjustments except the following description are mentioned in the service manual test.
* Use isolation transformer when HOT chassis.

ON SCREEN

1. Display characters on the screen.
2. As shown in the Fig. C-2, adjust the character positions with the CLK VR (On screen adj. VR).
3. Confirm that the characters are also located approximately at the same positions on other channels.



Size	POSITION (approximate)
13" or 14"	35 mm
19" or 20"	50 mm
25" or 27"	70 mm

Fig. C-2

HORIZONTAL LINE

- CUT-OFF SERVICE SWITCH
  Select the CUT-OFF SERVICE SWITCH from N to S and a HORIZONTAL LINE will appear.
  (When returning a monochrome pattern select the CUT-OFF SERVICE SWITCH from S to N and a monochrome pattern will appear.)
- CUT-OFF SERVICE TIP
  Reconnect the CUT-OFF SERVICE TIP from N to S and a HORIZONTAL LINE will appear.
  (When returning a monochrome pattern reconnect the CUT-OFF SERVICE TIP from S to N and a monochrome pattern will appear.)
- VIDEO CUT WIRER
  Connect a jumper wire between TP-35A and TP-35B, after removing the VIDEO CUT WIRE, and a monochrome pattern will appear.
  (Reconnect the VIDEO CUT WIRE to the normal position, after removing the jumper wire from TP-35A and TP-35B.)

■ V. IF

1. Connect a color bar generator to antenna terminal. (When the signal is too strong, use the attenuator.)
2. Connect DC voltmeter (or tester) between AGC terminal of E. Tuner and earth.
3. Rotate NOISE VR so that RF. AGC voltage becomes DC 4.5 V ± 1 V.
4. Adjust CW transformer so that the indicator becomes to minimum and also confirm that picture in optimum conditions is obtained.
5. Confirm the adjustment of NOISE VR.

■ RF. AFC

1. Connect a color bar generator to antenna terminal.
2. Adjust AFC transformer so that the voltage of TP-16 becomes DC 7.0 V ± 0.5 V.
   (Confirm to swing between about 9 V and 4 V previously.)

■ S. IF

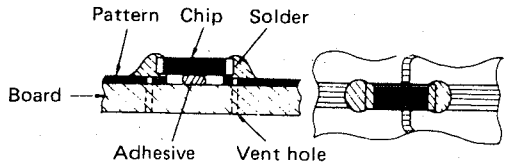
1. Tune in a local station preferably a program with the continuous audio.
2. Adjust TAKE OFF Transf. (T601) and S. IF Transf. (T602) so that the sound becomes to maximum without distortion.

REPLACEMENT OF THE CHIP

* **CHIPS ARE NOT USED ON CERTAIN MODELS. REFER TO THE DESCRIPTIONS ON THIS PAGE ONLY WHEN WORKING ON MODELS ON WHICH CHIPS ARE EMPLOYED.**
* Replacement of the chip on printed circuit board can be performed easily as follows.

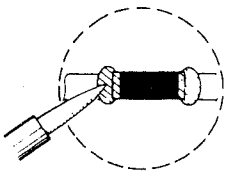
1 When mounted

[Resistor · Capacitor]

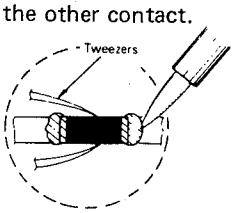


2 Removal of the chip

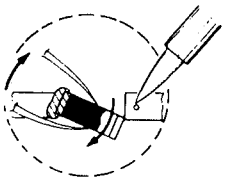
(1) Remove either of the soldered contacts.



(2) Hold the chip with tweezers and remove the other contact.



(3) Work the chip free from the adhesive with tweezers.

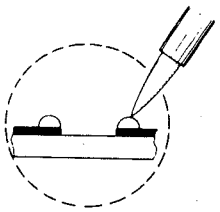


3 Preheating and soldering of chip pieces

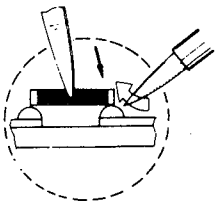
Be sure to preheat chip pieces (except the transistor) especially the capacitor before soldering with hot air, about 150°C (hair dryer or such can be used) for about 2 minutes. Then, immediately solder with an iron of about 30W.

4 Replacing the chip pieces

(1) Apply the solder to the board first.

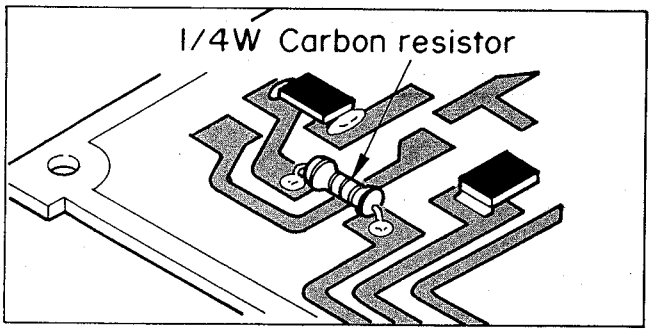


(2) Hold the chip with tweezers and solder it in place, hold the iron at a 45° angle when soldering.



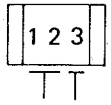
■ Discrete parts can be substitutionally mounted as shown in the figure on the right.
Mounting is also possible by passing the wires from the board front side (parts side) through the chip soldering hole (vent hole of registration part).
Substitute parts are as follows.

- Chip Metal Glaze Resistor
  → Carbon Resistor 1/4W ±5%
- Chip Ceramic Capacitor
  → Ceramic Capacitor 50V ±5%



■ **Decoding of chip parts constant terms**

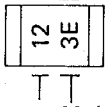
< Chip Metal Glaze Resistor >



Constant term: 12 — Multiplier: 3

$12 \times 10^3 = 12000\Omega = 12k\Omega$

< Chip Ceramic Capacitor >



- K, M, Z, P . . . . . Tolerance of ordinary type
- C, P, R, S, T, U . . Temperature coefficient of temperature compensation type

Constant term: 12 — Multiplier: 3E

$12 \times 10^3 = 12000pF = 0.012\mu F$

REPLACEMENT PARTS LIST INFORMATION

*** UTILIZE THE INFORMATION ON THIS PAGE IN COMBINATION WITH THE REPLACEMENT PARTS LIST. WHEN ORDERING REPLACEMENT PARTS PLEASE SPECIFY THE PART NUMBER AS SHOWN IN THIS LIST INCLUDING PART NAME, AND MODEL NUMBER. COMPLETE INFORMATION WILL HELP EXPEDITE THE ORDER.**

PRODUCT SAFETY NOTE
Components identified by the ⚠ symbol in the PARTS LIST and the shaded areas on the Schematic have special characteristics important to safety. Before replacing any of these components read carefully the SAFETY PRECAUTION on Page A of this Service Manual. DO NOT degrade the safety of the set through improper servicing.

1. ABBREVIATED WORD OF RESISTORS AND CAPACITORS

RESISTOR

C R	:	Carbon Resistor
Comp. R	:	Composition Resistor
OM R	:	Oxide Metal Film Resistor
V R	:	Variable Resistor
MF R	:	Metal Film Resistor
CMF R	:	Coating Metal Film Resistor
UNF R	:	Unflammable Resistor
F R	:	Fusible Resistor
CH MG R	:	Chip Metal Glaze Resistor

CAPACITOR

C Cap.	:	Ceramic Capacitor
M Cap.	:	Mylar Capacitor
E Cap.	:	Electrolytic Capacitor
BP E Cap.	:	Bi-Polar (or Non-Polar) Electrolytic Capacitor
MM Cap.	:	Metalized Mylar Capacitor
PP Cap.	:	Polypropylene Capacitor
MPP Cap.	:	Metalized PP Capacitor
PS Cap.	:	Polystyrol Capacitor
Tan. Cap.	:	Tantal Capacitor
CH C Cap.	:	Chip Ceramic Capacitor

2. FOLLOWING RESISTORS AND CAPACITORS OF STANDARD ELECTRICAL COMPONENTS ARE OMITTED FROM THIS PARTS LIST. EACH PART NUMBER OF THESE STANDARD REPLACEMENT COMPONENTS IS DEFINED AS FOLLOWS.

Carbon Resistor (C R): Lead form (—⊂⊃—)

Rating	Part No.
¼W	QRD141J-□□□ (CR: Carbon Resistor; ¼W; Tolerance; Lead form; Constant term)
½W	QRD121J-□□□

Composition Resistor (Comp. R): Lead form (—⊂⊃—)

Rating	Part No.
½W	QRC121K-□□□ (Comp. R: Composition Resistor; ½W; Tolerance; Lead form; Constant term)

Mylar Capacitor (M Cap.): Lead form ( )

Withstand Voltage	Part No.
50V	QFM41HK-□□□ (M Cap.: Mylar Capacitor; Lead form; 50V; Tolerance; Constant term)
100V	QFM42AK-□□□
200V	QFM42DM-□□□

Ceramic Capacitor (C Cap.): Lead form ( )

Withstand Voltage	Parts No.
25V	QCS11EJ-□□□ (C Cap.: Ceramic Capacitor; Lead form; 25V; Tolerance; Constant term)
50V	QCS11HP-□□□
500V	QCS12HP-□□□

Electrolytic Capacitor (E Cap.): Lead form ( )

Withstand Voltage	Parts No.
6.3V	QET40JR-□□□ (E Cap.: Electrolytic Capacitor; Lead form; 6.3V; Tolerance; Constant term)
10V	QET41AR-□□□
16V	QET41CR-□□□
25V	QET41ER-□□□
50V	QET41HR-□□□

Chip Metal Glaze Resistor (CH MG R)

Chip name	Chip No.	Substitutional Part No.
CH MG R	QRS148J-□□□ (CH MG R: Chip Metal Glaze Resistor; 1/4W; Chip; Tolerance; Constant term)	QRD141J-□□□ CR 1/4W ±5%

Chip Ceramic Capacitor (CH C Cap)

Chip name	Chip No.	Substitutional Part No.
CH C Cap	QCS81HJ-□□□ (CH C Cap: Chip Ceramic Capacitor; Chip; 50V; Tolerance; Constant term)	QCS11HJ-□□□ C Cap 50V ±5%

3. DECODING OF TOLERANCE AND CONSTANT TERM

TOLERANCE

J: ±5% K: ±10% M: ±20% N: ±30% H: $^{+50}_{-10}$%

Z: $^{+80}_{-20}$% P: $^{+100}_{-0}$% R: $^{+30}_{-10}$% F: ±1%

CONSTANT TERM

• Carbon Resistor (¼W, ±5% Tolerance)

QRD141J-□□□ (CONSTANT TERM.)

- □ □ □ — 2.7Ω → QRD141J-2R7
- 1 R 0 → 1.0Ω — 47kΩ → 47 x 10³ → QRD141J-473
- 9 R 7 → 9.7Ω

- 1 0 □ → 10□ means 10 x 10□ (Ω)
- 8 2 □ → 82□ means 82 x 10□ (Ω)

• Ceramic Capacitor (50 Volts, ±5% Tolerance)

QCS11HJ-□□□ (CONSTANT TERM.)

- □ □ □ — 5pF → QCS11HJ-5R0
- 1 R 0 → 1.0pF — 680pF → 68 x 10¹ → QCS11HJ-681
- 8 R 0 → 8.0pF — 3300pF → 33 x 10² → QCS11HJ-332

- 1 0 □ → 10□ means 10 x 10□ (pF)
- 8 8 □ → 88□ means 88 x 10□ (pF)

JVC C-2627(CA) SCHEMATIC DIAGRAM

NOTICE

The voltage reading and waveform ware measured at each point with a multi-meter and an oscilloscope while receiving a service color bar signal with a sufficient sensitivity. The measurements were made with each VR under the condition just after the shipment. The figures of the signal circuits may be more or less different after adjustments, so use the figures simply for reference.

Multimeter used
DC 20kΩ/V
Given figures are all DC voltages.
Sweep speed of oscilloscope
H → 20 μS/div. V → 5 mS/div.
Others → sweep speed specified

Since the schematic diagram is a standard one, the circuit and circuit constants may be subject to change for improvement without any notice.

SAFETY

FR (-WW- FR) denotes a fusible resistor which operates as a fuse. When replacing fusible resistors parts indicated with black shading ( ) in the circuit diagrams, be sure to ensure safety by using designated parts.
As to other parts too, use designated parts to maintain safety and performance.

INDICATION OF PARTS SYMBOL

Inside board (Example) SX-1172A: R1209 → R209
Outside board (Example) R0001 → R01

SCHEMATIC DIAGRAM INDICATION

Resistor

- Resistance value
  Without unit: [Ω] K : [kΩ] M : [MΩ]
- Rated allowable power
  Without indication : 1/6W
  Others Indicated
- Type
  Without indication : Carbon resistor
  OMR : Oxide metal film resistor
  UNF : Unflammable resistor
  MF R : Metal film resistor
  FR : Fusible resistor
- * Composition resistor 1/2 [W] is indicated as 1/2S or Comp.

Capacitor

- Capacitance
  Above 1 [pF] : Below 1 [μF]
- Withstand Voltage
  Without indication : DC 50 [V]
  Others : DC withstand voltage [V]
  AC indicated : AC withstand voltage [V]
- Indications for electrolytic capacitors are as follows.
  (Example)
  47/50 → capacitance [μF] / withstand voltage [V]
- Type
  Without indication : Ceramic capacitor
  MY : Mylar capacitor
  MM : Metalized mylar capacitor
  PP : Polypropylene capacitor
  MPP : Metalized polypropylene capacitor
  NP : Nonpolar electrolytic capacitor
  BP : Bipolar electrolytic capacitor
  TAN. : Tantalum capacitor

Coil

Without unit : [μH]

Power Supply * Each voltage reading specified.

: B_1 : B_2
: Standby Voltage

Connection method

: Connector, : Receptacle
: Wrapping or soldering

Test point & GND. symbol.

: Test point by miniature GT pin
: Only test point display
: Live (Primary) side ground

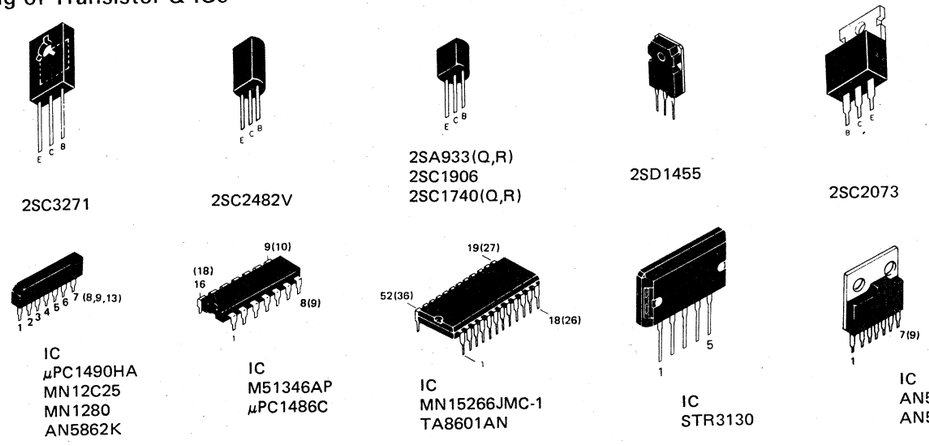
Note for service

Use isolation transformer when hot chassis.
The chassis and any sub-chassis contrained in some product are connected to one side of the AC power line. An isolation transformer of adequate capacity should be inserted between the product and the AC power supply point while performing any service on some product when the HOT chassis is exposed.

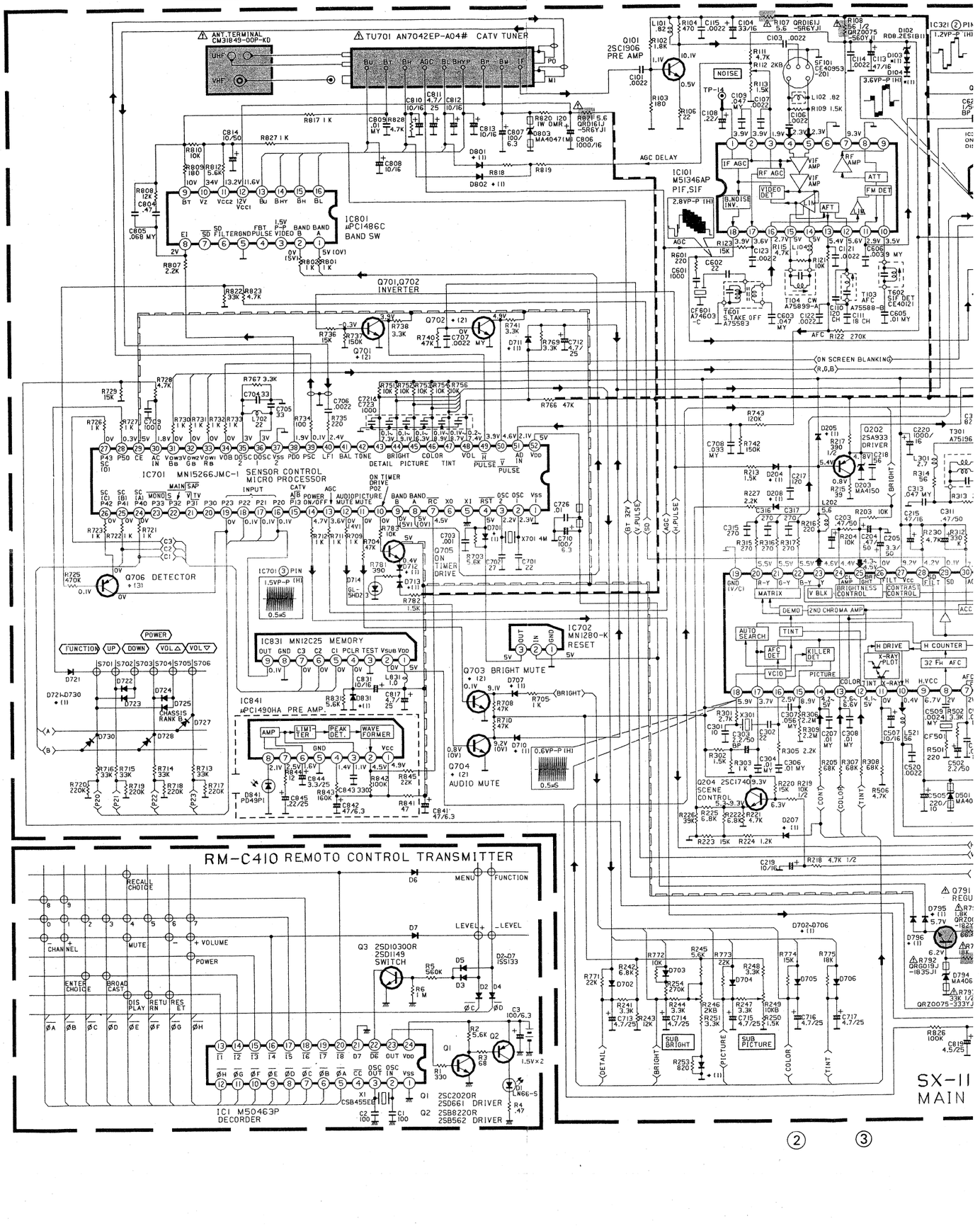
This mark shows a fast operating fuse, the letters indicated below show the rating.

○○A ○○○V

Basing of Transistor & ICs



SCHEMATIC DIAGRAM



② ③

SCHEMATIC DIAGRAM

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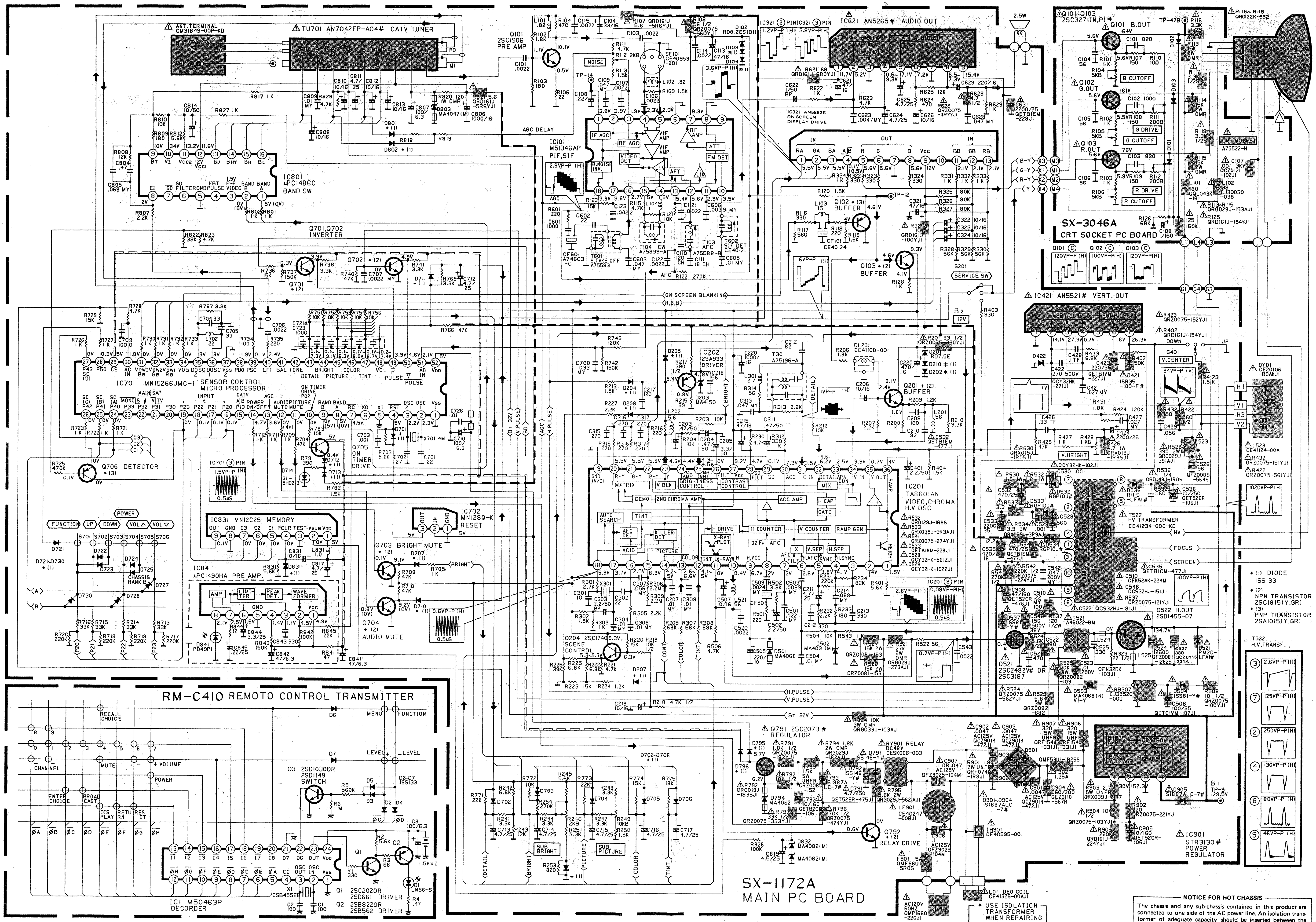


ANT.TERMINAL CM31849-00P-KD
TU701 AN7042EP-A04# CATV TUNER
Q101 2SC1906 PRE AMP
IC621 AN5265# AUDIO OUT
IC801 μPC1486C BAND SW
IC101 M51346AP PIF,SIF
IC321 AN5862K ON SCREEN DISPLAY DRIVE
Q101~Q103 2SC3271(N,P)#
Q101 B.OUT
Q102 G.OUT
Q103 R.OUT
SX-3046A CRT SOCKET PC BOARD
Q701,Q702 INVERTER
IC701 MN15266JMC-1 SENSOR CONTROL MICRO PROCESSOR
Q102 BUFFER
Q103 BUFFER
SERVICE SW
IC421 AN5521# VERT. OUT
Q706 DETECTOR
IC831 MN12C25 MEMORY
IC702 MN1280-K RESET
Q703 BRIGHT MUTE
Q704 AUDIO MUTE
IC841 μPC1490HA PRE AMP.
Q202 2SA933 DRIVER
Q201 BUFFER
IC201 TA8601AN VIDEO,CHROMA H.V OSC
T522 HV TRANSFORMER CE41234-00C-KD
Q204 2SC1740 SCENE CONTROL
Q521 2SC2482V# OR 2SC3187
Q522 H.OUT 2SD1455-07
Q791 2SC2073# REGULATOR
RY901 RELAY DC48V CESK006-003
Q792 RELAY DRIVE
IC901 STR3130# POWER REGULATOR
RM-C410 REMOTO CONTROL TRANSMITTER
IC1 M50463P DECORDER
Q3 2SD1030OR 2SD1149 SWITCH
Q1 2SC2020R 2SD661 DRIVER
Q2 2SB8220R 2SB562 DRIVER
SX-1172A MAIN PC BOARD
USE ISOLATION TRANSFORMER WHEN REPAIRING
(1) DIODE 1SS133
(2) NPN TRANSISTOR 2SC1815(Y,GR)
(3) PNP TRANSISTOR 2SA1015(Y,GR)
T522 H.V.TRANSF.

NOTICE FOR HOT CHASSIS

The chassis and any sub-chassis contained in this product are connected to one side of the AC power line. An isolation transformer of adequate capacity should be inserted between the product and the AC power supply point while performing any service on this product when the HOT chassis is exposed.

J5265
J5521

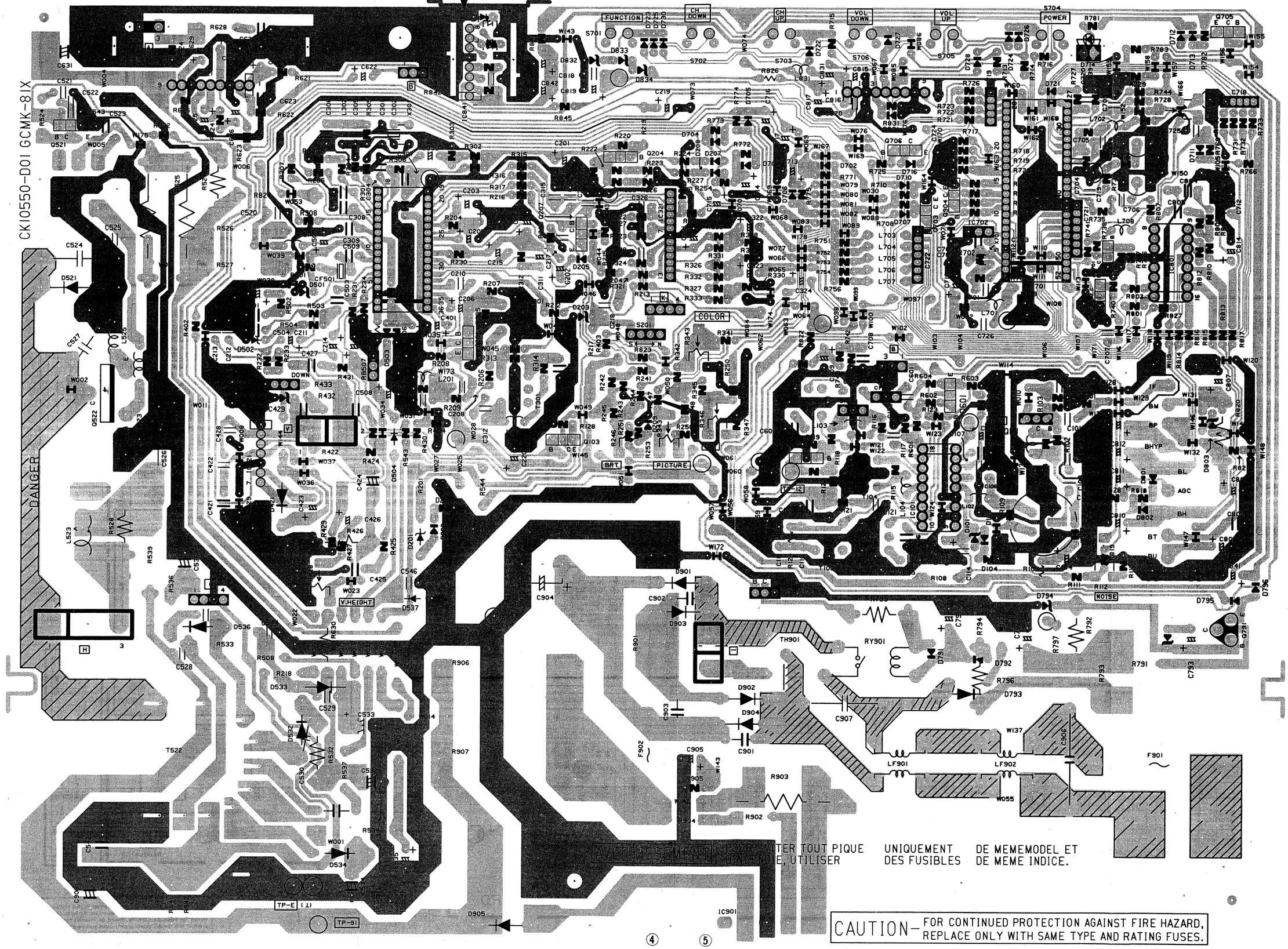
n Japan
NPS/V.P (1)

(2) (3)

MAIN PCB BACK PATTERN (CK10550-D01)

ONLY LIVE GND (⊥)

CK10550-D01 GCMK-81X



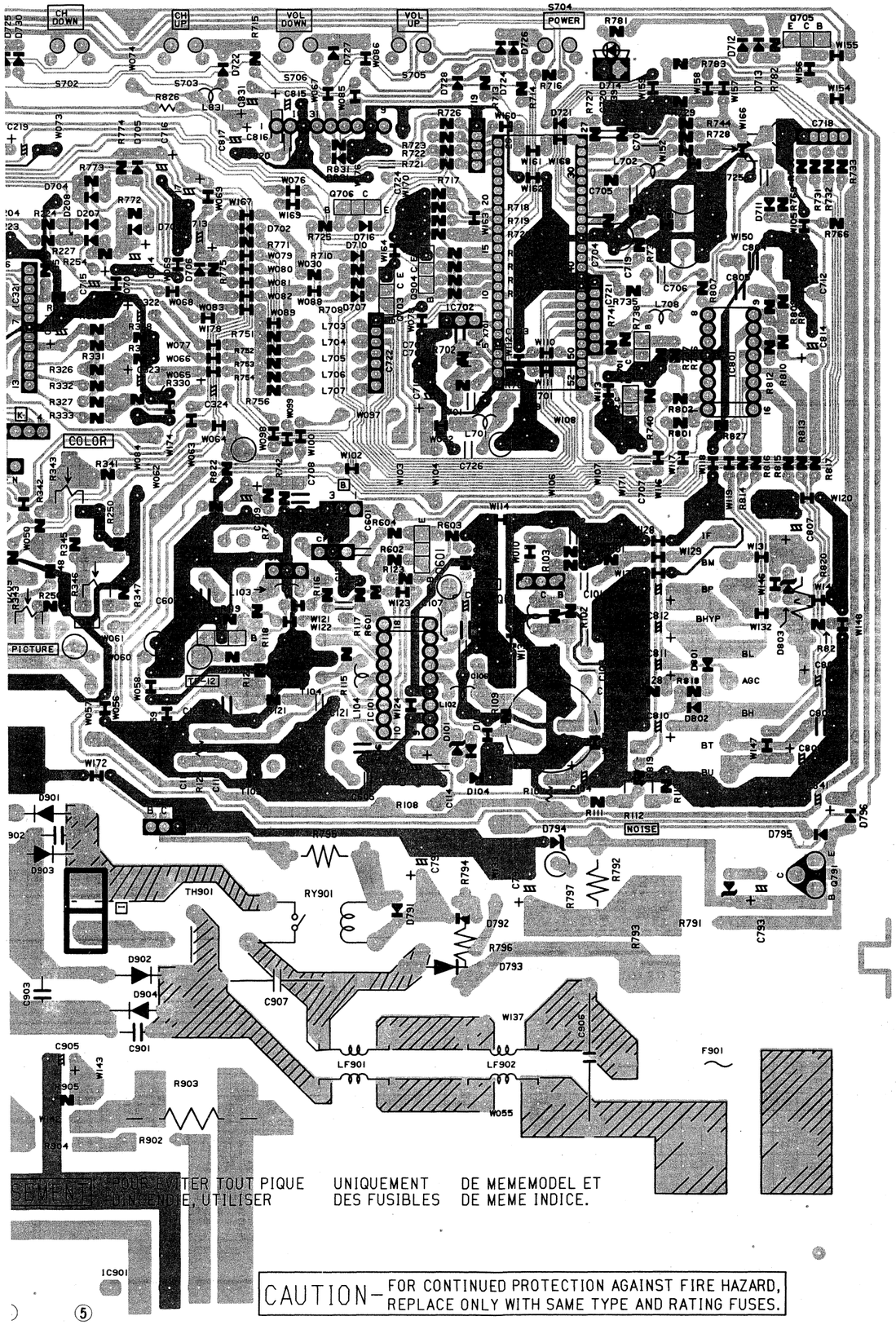
ALIGNM

CHANNEL CHART

MODE T	MODE V	MODE CATV	BAND	CHANNEL REAL	CHANNEL DISPLAY	TUNER BAND
○	○		VL	02	02	I
				03	03	
				04	04	
				05	05	
				06	06	
			VH	07	07	
				08	08	
				09	09	
				10	10	
				11	11	
				12	12	
				13	13	
			MID	A	14	II
				B	15	
				C	16	
				D	17	
				E	18	
				F	19	
				G	20	
				H	21	
				I	22	
			SUPER	J	23	III
				K	24	
				L	25	
				M	26	
				N	27	
				O	28	
				P	29	
				Q	30	
				R	31	
				S	32	
				T	33	
				U	34	
				V	35	
				W	36	
			HYPER	W+1	37	
				W+2	38	
				W+3	39	
				W+4	40	
				W+5	41	
				W+6	42	
				W+7	43	
				W+8	44	
				W+9	45	
				W+10	46	
				W+11	47	
				W+12	48	
				W+13	49	
				W+14	50	
				W+15	51	
				W+16	52	
				W+17	53	
				W+18	54	
				W+19	55	
				W+20	56	
				W+21	57	
				W+22	58	
				W+23	59	
				W+24	60	
				W+25	61	
				W+26	62	
				W+27	63	
				W+28	64	
				W+29	65	
			VL	A-7	93	I
				A-6	94	
			SUB MID	A-5	95	
				A-4	96	
				A-3	97	
				A-2	98	II
				A-1	99	
			VL	A-8	01	I
○	×		UHF	14 ~ 69		IV

TOTAL 128CH — VHF 72CH, UHF 56CH

NOTE: TO RECEIVE THE SUBSCRIPTION OR PREMIUM PROGRAMMING FROM CERTAIN CABLE COMPANIES. SPECIAL ADAPTERS MAY BE REQUIRED.


CH DOWN
CH UP
VOL DOWN
VOL UP
S704 POWER
S702
S703
S706
S705
Q706 C
Q705 E C B
COLOR
PICTURE
TP-12
TP-14
IC901
D901
D902
D903
D904
TH901
RY901
RY935
C907
C905
C901
C903
W137
LF901
LF902
C906
F901
R903
R902
W055
D791
D792
D793
D794
D795
D796
R791
R792
R793
R794
R796
R797
C791
C792
C793
C794
C795
W143
W172
NOISE
BT
BU
AGC
BH
BHYP
BL
BM
BP
1F
IC702
IC801
IC101
L702
L703
L704
L705
L706
L707
L701
C726
C722
C706
C708
C719
C721
C735
C712
C814
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C810
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